



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF PUBLIC INSTRUCTION



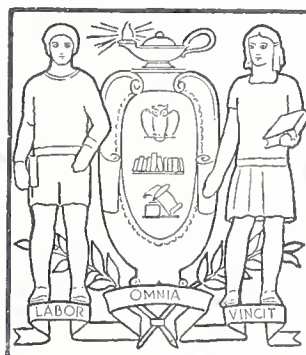
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COURSE OF STUDY IN

HEALTH INSTRUCTION

AND

PHYSICAL EDUCATION



GRADES VII-VIII

BULLETIN 12 C

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CHILD HEALTH AND THE SCHOOL PROGRAM

THE CHILDREN'S CHARTER sets forth the following objective for the health instruction program in the elementary schools:
"For every child, from birth through adolescence, promotion of health, including health instruction and a health program, wholesome physical and mental recreation, with teachers and leaders adequately trained."

Good health has much to do with happiness and security. It aids in the attainment of worthy personal ambitions and permits individuals to conserve their resources. It increases the opportunity for cultural advancement and makes possible more cheerful and useful lives. The health of an individual determines his usefulness to his community. The health of a community determines to a large extent its economic and social importance.

An adequate program of school health involves health protection, health correction, health instruction, and physical education. It should develop in every individual the highest physical, mental, social and spiritual possibilities. Such a program cannot be confined to the school room. It must be concerned with the health behavior of the child in all of his activities.

Schools today, to be effective, must be child-centered. Health outcomes in such schools are expressed in terms of the growth of the child as a personality; in terms of physical development, emotionalized health attitudes, desirable adjustments to health situations and conditions that are a part of daily life, and the enjoyment of practices related to these outcomes.

In such a program the conduct of the pupil becomes the chief criterion for success. Health teaching is successful only when the child enjoys and appreciates cleanliness and fresh air; increases in muscular coordination; habitually sits, stands and walks well; secures sufficient rest and sleep; endeavors to avoid conditions that drain vitality; finds satisfaction in wearing suitable clothing; appreciates and chooses nutritious food and wholesome beverages; is hazard conscious and practices safe measures; avoids and appreciates why he should avoid the use of stimulants and narcotics; increases in self-control, cheerfulness and poise, and appreciates the importance of these characteristics.

JAMES N. RULE,
Superintendent of Public Instruction.

June, 1934.

ACKNOWLEDGMENTS

In the preparation of this course, we are grateful for the advice and help of the following committee, members of which evaluated the preliminary outline and gave many valuable suggestions as to what should be included in the course:

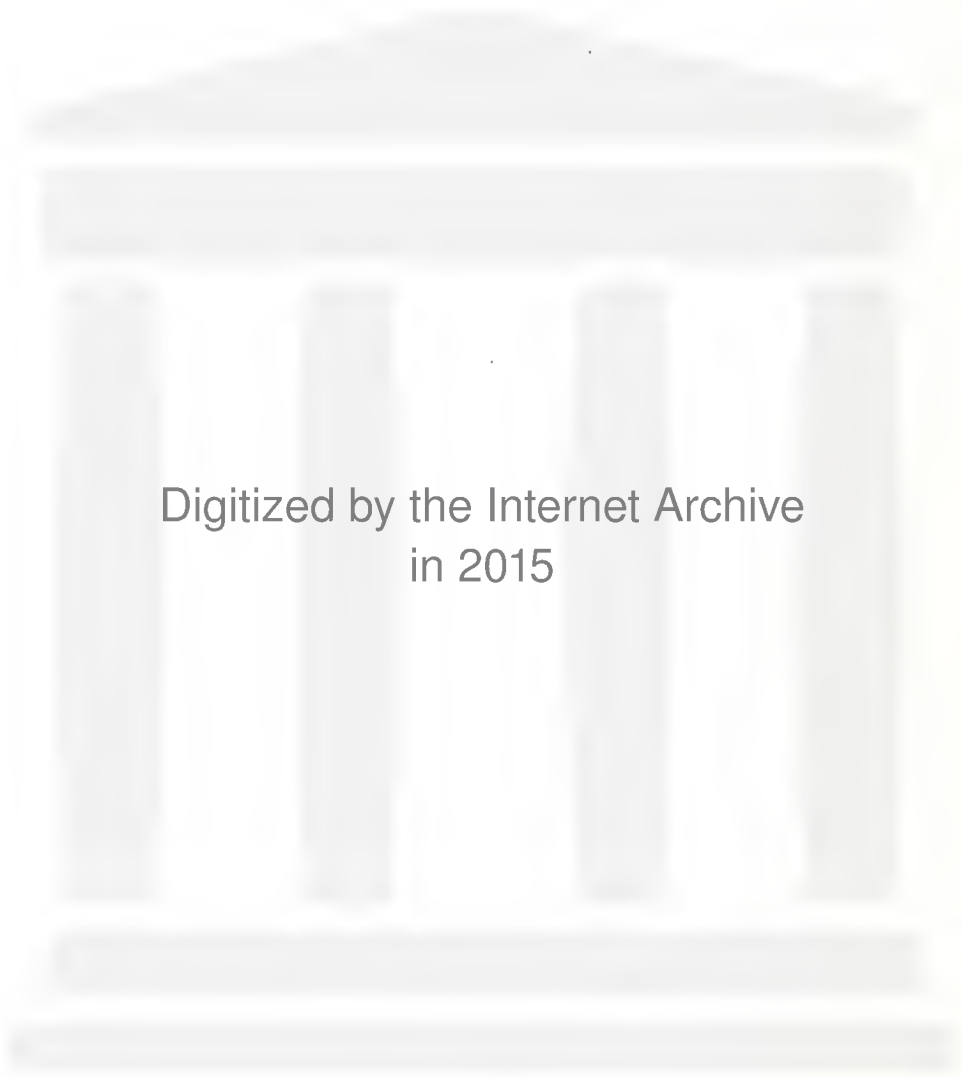
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- MISS ESTHER B. LOVE, Rural School Teacher, Lycoming County
- MRS. ANNA DEPLANTER BOWES, Philadelphia Child Health Society

In addition, many classroom teachers responded to the initial request for suggestions relative to this course. Other teachers have examined the preliminary material and have made suggestions, many of which have been incorporated. We deeply appreciate the help of these teachers.

This course is a part of a continuous program of curriculum revision organized under the direction of William H. Bristow, Chief, Education Bureau, and was prepared by Helena McCray with the assistance of Mrs. Lois Owen, Charles D. Vibberts, Helen Purcell and Mrs. Edith D. Davison under the general direction of William G. Moorhead, Director, Division of Health and Physical Education. The outlines for grades seven and eight are an adaptation of material found in Bulletin 61, Tentative Course of Study in Health Instruction for Secondary Schools. The adaptation was made by William G. Moorhead. This material was prepared for printing by Helena McCray and D. M. Cresswell, Department Editor.

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HEALTH INSTRUCTION AND PHYSICAL EDUCATION

INTRODUCTION

THE AIM of the health program is to help our youth make desirable adjustments in their way of living so that they may increasingly do their part in securing for themselves and others the conditions necessary for health—physical, mental, emotional, and social. The goal set for health teaching, therefore, is correct health practices.

PLAN OF COURSE

To help the teacher see the program in health as a whole, and its relation to opportunities and possibilities for making it function in the life of the child, a chart* has been prepared showing these inter-relationships. The chart has the following divisions:

1. Conditions necessary for the growth and development of the child.
2. Objectives that are related to those conditions toward which the teacher is to work.
3. Activities and procedures necessary to secure these objectives.
4. Evidences of pupil growth in the objectives which universally operate throughout the elementary grades.

CONDITIONS NECESSARY FOR GROWTH AND DEVELOPMENT

The following conditions for growth and development are especially important in relation to child health:

1. **FAVORABLE ENVIRONMENT.** Whatever the situation may be in reference to cleanliness, to ventilation, to lighting, to heating, to furnishings of the classroom, it is the responsibility of the teacher to maintain the good conditions found and to use every possible influence to improve the poor ones. The use of these situations as bases for her health teaching provides opportunities for pupils to establish practices and to build attitudes related to an environment which contributes to health.

2. **SATISFACTORY NUTRITION.** Just as no animal can thrive on an improper diet, so no child can attain his fullest possibilities in growth and development without nourishing food. The teacher who takes advantage of the lunch period where pupils are either selecting a lunch at school or eating food brought from home, is using one of the finest opportunities of the whole day's program for health training and instruction. Here she is able to see evidences of pupil growth in those attitudes and practices related to a wholesome diet. Since eating and sleeping are so essential to the satisfactory nutrition of the child and because these practices are for the most part carried on in the home, the teacher should work with the parents in order to secure the greatest benefits for the children. She will have opportunities to encourage those parents who are carrying out desirable programs

* See pages 32-33.

of living and to make suggestions to parents who are not. Through visits to the home, and through organized groups of parents in the school, she may be able to work with them in reaching the goal set for the school child.

3. OPPORTUNITY FOR EXPRESSION. One of the great hungers in life is for activity. This may be satisfied through various types of expression on the part of the child, such as, big muscle activity in a vigorous game; participating in some task as making seats for the library section of the classroom; an activity that gives the child an opportunity to express himself through the painting of a landscape or the writing of a poem.

Throughout the day the child should be helped to think for himself and be given an opportunity to express his thoughts in ways that will give him the satisfaction of a realization of the accomplishment of something worthwhile. Because of the many opportunities for expression through mental activity, the teacher should strive to secure more time for activities that involve the use of big muscles. A better balanced program is needed in the majority of our schools.

4. PROTECTION FROM DRAINS ON VITALITY. In those schools where there is efficient health service, there is the greatest protection from drains on vitality. In any system every teacher is able to contribute to this part of the health program, but where there is neither school physician nor nurse, this cooperation is particularly necessary and valuable.

Protection requires attention to the prevention, detection, and correction of health handicaps. The classroom teacher is a vital factor in this program for the prevention and correction of health handicaps. The health examination properly set up and conducted affords an opportunity for her to secure valuable information as to the need of better health practices and to possible causes of retardation. At the time of the health examination, she should call the attention of the school physician to special cases which she may have discovered. She should be on the alert at all times for conditions which may not have been detected by the physician or which may have developed since the health examination. One of the first steps in solving behavior problems is the detection and fullest possible correction of health handicaps.

The teacher should feel a direct responsibility for the correction of health handicaps. The prevention and correction of such defects may be used as motivating factors in health instruction. Thus, the handicapped child may be stimulated to desire the correction of his handicaps, and the child free from defects may find satisfaction in following practices that may prevent handicaps. With older children a personal talk to explain the significance of these defects may bring results.

No member of the school staff has a better opportunity to urge remedial care than the teacher. In many instances, it may be desirable for her to discuss with the parents the need for the correction of health handicaps. The fact that parents may not immediately carry out the recommendations of the school physician is more frequently due to lack of understanding than to wilful neglect. The teacher should know what medical services are available in the community for children whose parents are unable to pay for treatment.

For the further protection of children the regulations of the Department of Health require that any child or other person showing the following symptoms shall be excluded from school immediately:

- a. An unusual skin eruption.
- b. Swelling about the neck suggesting mumps.
- c. Soreness of the throat.
- d. Symptoms of whooping cough.
- e. Diseases of the eye.

In addition, the teacher should make a report to the health officer of the district in which the school is located as follows:

- a. The fact of exclusion.
- b. The reason for exclusion.
- c. The name and address of the person excluded.

The carrying out of this regulation presupposes a daily classroom survey by the teacher. This may be a formal or an informal survey. In the informal type, the child is not conscious of being looked over. This type is to be desired, providing the teacher keeps it in mind each morning. This means that the teacher must see each pupil as he enters the room. In the formal type of survey the teacher stands with her back to the window, the children passing before her at intervals of about two feet. The morning survey should include cleanliness as well as the symptoms of communicable disease.

The formal type of classroom survey should always be used in case of an epidemic or threatened epidemic. The procedure should be continued during the period of incubation. The survey should be given in the morning so that any child having symptoms of a communicable disease may be excluded as early in the day as possible. This, however, does not free the teacher from the responsibility of being watchful for any symptom that may develop during the day. In addition, (1) a careful check-up of all absentees should be made, (2) the home should be visited when the reason for absence is not definitely known, and (3) any cases showing symptoms of a communicable disease should be reported to the health officer.

No child or other person excluded from school on account of having or of being suspected of having a quarantinable disease shall be readmitted to school until he or she presents a certificate from a physician stating that the condition for which the child was excluded was not communicable, or until he or she presents a certificate from the health officer indicating release from quarantine.

Children suffering from impetigo, scabies, ringworm or favus may attend school when the services of a school nurse or school physician are available daily for the supervision and inspection of the adequacy of the dressings applied to the lesions.

5. PROTECTION FROM PHYSICAL INJURY. The increasing danger to the child due to the rapidly changing situations in our mode of living calls for definite instruction in safe practices. He will need to learn to discriminate between dangers that are to be avoided and those that must be faced, and to develop the skills or practices that will protect him from the accidents that may occur. The importance of this part of the health program is illustrated in the fact that in the age group from five to fourteen years, accidents cause nearly three times as many deaths as any single disease. That safety educa-

tion in the schools is effective, is implied in the following quotation from the Report of the Committee on the School Child of the White House Conference on Child Health and Protection in "The School Health Program": "Figures recently compiled by the Federal Bureau of the Census show that during the last seven years, which happens to be about the period during which intensive work in safety education in the schools has been carried on, the accident mortality of adults has increased 32 per cent, while during the same period the accident mortality of children has remained practically stationary in spite of the increase of population and the increased number of automobiles and other hazards."

6. PROVISIONS FOR DESIRABLE EMOTIONAL AND SOCIAL EXPERIENCES. The teacher, who is working for the development of the *whole* child, will readily understand why this sixth condition is added. When all of the first five conditions are taken care of, but the child is continually facing defeat and is in constant fear of meeting the disapproval of parent or teacher, all necessary conditions have not been provided for his best growth and development. Mental, emotional and social aspects must be included, as well as physical, in order to meet the needs of the whole child. No matter how fine his physical condition may be, he cannot be said to be an example of the ideal for which we are working in child health, if he does not have a wholesome personality.

Opportunities for growth in personality come through the daily experiences of the child. The sympathetic teacher will aid the pupil in gaining control of himself and in strengthening traits essential to a well rounded life. The lists for each grade under Wholesome Personality² will suggest attitudes and practices to be encouraged.

To be helpful, the teacher herself should be imbued with a love of justice, enthusiasm, kindness, a sense of humor, and emotional stability. Her criterion for this phase of the program will be the welfare of the *whole* child—that he is ever growing in wholesome social relationships with all others.

OBJECTIVES OF THE COURSE

As indicated on the chart page 32, the primary objectives of health instruction and physical activities are to help the pupils to build emotionalized attitudes toward worthy health practices; to make desirable adjustments to health situations in their environment; to enjoy conditions and practices that are favorable to the promotion of health.

The first objective of the teacher is to help the pupils to *build up emotionalized attitudes* toward worthy health practices. The playground may be of ample space for all to participate in activities, the lavatory may be equipped with basins, warm water, soap and towels, but if the child does not find pleasure in the games, or satisfaction in clean hands, there will be little carry-over in these activities when he

¹ Committee on the School Child of the White House Conference on Child Health and Protection. The School Health Program. New York: Century Company. 1932. p. 180.

² The statements under Evidences of Growth in the section on Wholesome Personality include, in the most part, those outcomes found in "Health Behavior" prepared by Dr. Thomas D. Wood and Dr. Marion O. Lerrigo. The book has been most helpful in the preparation of this material.

is out of school. There must be something pleasurable or satisfying in the health practice if it is to have any lasting effect on behavior.

The second objective of the teacher is to help the pupils to *make desirable adjustments* to health situations in their environment. Health teaching and instruction must be adapted to the age, ability, and interests of the pupil. Even then the lesson will not be effective until the pupil is able to adapt the suggestions to his individual case. For example, if there is no bath tub in his home, he should be taught how it is possible to keep the body clean when only a basin is available. If only fifteen cents is allowed for his lunch, he should learn how to choose the best food for that amount.

Only as children find satisfaction in doing those things which tend for better ways of living, can we expect these practices to be continued when they are left to their own responsibility. The third objective, therefore, of the teacher is to help the pupils to *enjoy conditions and practices* that are favorable to the promotion of health. Children need to see the advantages of safe practices, of sound teeth, of self-control, of clean and well-nourished bodies. This is not to be the transitory satisfaction of winning stars or prizes, neither that of doing better than some one else, but the satisfaction of finding that one is able to do something that is worthwhile and is able to take responsibility for doing it.

SUGGESTED ACTIVITIES AND PROCEDURES

With health behavior set as the goal in health education, emphasis must be placed on activity as the basis of learning. Situations within the pupils' experiences in school, in the home, and in the community should be used as opportunities for health practices and as the basis of discussions on their own health problems. The importance of these procedures must be appreciated by the teacher in order to secure the desired results.

SITUATIONS AT SCHOOL

In column three of the chart, page 32, examples of type situations occurring at school will be found. These will suggest many others to teachers. Anne Whitney in the *Journal of Health and Physical Education* for May, 1933, says that to use those situations within the child's environment that will be of most value to the teacher's own particular group "means training ourselves as teachers to search for the dynamic materials which lie richly about the daily lives of pupils, that we may help children to self-education in meeting the real problems of living, the solution of which offers continuously a fresh challenge, and builds in children a self-reliance and the feeling of security which comes only of success in thinking one's self out of a difficulty."¹

DEMONSTRATIONS AND DRAMATIZATIONS

For some of the practices associated with the home and the community, demonstrations and dramatizations are suggested in column

¹ American Physical Education Association. *Journal of Health and Physical Education*. American Physical Education Association, Ann Arbor, Michigan. May, 1933. Page 39.

four. When the latter are developed, the teacher should remember that the nearer the approach is to a real life situation, the more likelihood there is of a carry-over in practice. For example, instead of making the scene a castle, encourage the choice of homes like their own; instead of animals carrying their lunches to school, suggest that boys' and girls' activities may be made even more entertaining and worthwhile.

One of the best health projects for the elementary grades is The Child's Day. This may include: Wakening in the morning, dressing, preparing for and eating breakfast, helping mother, preparing for school, traveling to school (safety to be emphasized), participating in activities at school, preparing for and eating the noon meal, completing school activities, returning home, playing outdoors, helping mother, preparing for and eating the evening meal, enjoying an evening at home, preparing for bed. The time for rising and retiring will depend upon the age of the group with which the project is used. In like manner all of the objectives for the year in primary grades may be developed. Some teachers have correlated such a program with their language and reading. Others have also included hand-work and completed the project with a movie that illustrated the different situations the child had experienced through the day. For older boys and girls it is good training for each to work out his or her own daily program of living and discuss with the group the points in which they think the programs are strong or should be modified.

SUCCESS MEASURED BY PUPIL GROWTH

Throughout the course emphasis is placed on *evidences of pupil growth*. This course of study contemplates that the teacher shall be a constant student of her own pupils, that she shall observe their work and play, and determine on a basis of these observations the means necessary to make her program effective. Each year the evidences of pupil growth are to be the criteria by which the school and the teacher are to measure the results of health training and health instruction. Pupils should constantly gain in the ability to solve health problems:

1. By facing them squarely.
2. By discovering suggestions for their solution,
3. By determining the best suggestions,
4. By applying these suggestions to the solution of the problem.

Some evidences may be measured with paper and pencil tests, but the best types of learning express themselves in desirable emotionalized attitudes and in the value of the practices, skills and knowledges attained.

GRADES SEVEN AND EIGHT

HEALTH INSTRUCTION

The material presented in this course for seventh and eighth grades is approached from a somewhat different viewpoint than that of the first six years. The difference is to be found largely in the points of emphasis. In grades one to six, inclusive, the emphasis is placed primarily on the formation of proper health habits and attitudes without giving a detailed consideration to human physiology. Beginning with the seventh year, material is included which gives the child a basic physiological understanding of the necessity for certain health observances.

In the selection of the units of instruction, an effort has been made to select those of particular importance at these ages, and for those who will leave school before having the opportunity to continue a study of the units provided for grades above the eighth. The units suggested, together with the number of periods to be given to each, are as follows:

Grade VII		
<i>Unit</i>	<i>60 Minute Period</i>	<i>30 Minute Period</i>
Safety Education	3	6
Physical Activity and Posture	5	10
Stimulants and Narcotics	3	6
The Selection of Foods	13	26
The Health of the Respiratory System	12	24
Grade VIII		
Safety Education	3	6
Physical Activity and Posture	5	10
Stimulants and Narcotics	3	6
The Control of Infection	10	20
Care of the Special Senses	7	14
Health of the Circulatory System	8	16

It is recommended that an equal number of textbooks of each kind be purchased. This method provides more sources of material, broader viewpoints and is no more costly than the purchase of one book. It also means that each unit of instruction can be developed more effectively and extensively.

While the units of the program in health instruction are intended to be complete in themselves, opportunity should be taken to integrate the health problems of other subjects with the material herein offered. For example, the study of history provides many opportunities to relate the success or failure of colonization, wars, or economic movements with health factors. For example, failure of early colonization in America, due to epidemics of infectious diseases, and disease due to contaminated food; typhoid fever and smallpox as factors in the conduct of all of our wars excepting the world war, influenza in the world war; the effects of undernourishment upon the future generation in periods of economic depression.

PHYSICAL EDUCATION

The physical education activities included for grades seven and eight have been selected to meet the essential needs of pupils of these ages. The years represented by grades seven and eight is a period of rapid bodily growth. There is a marked increase in the heart relative to the size of the blood vessels, an increase in chest and lung capacity, and in strength of hand and accessory muscles. It is a period of a tendency to nervous disorders unless an outlet is provided through physical activity.

The types of activity most needed at these ages are self-testing activities and team games. This period of admiration for physical prowess and cooperative effort, offers to the teachers opportunities for providing activities that involve great physical activity which in turn furnish relief for the high blood pressure and escape from marked tendencies and dangers of this age. Activities have, therefore, been selected that further the development of large muscle areas and finer motor adjustments and that also relate motor activity to a social group for the purpose of developing social consciousness.

I. Safety Education

It is recommended that at least three one hour or six half-hour periods be given to safety education each year—in September, December and March—so as to make sure that pupils are familiar with safety practices and have made these practices habitual. It is contemplated that school opportunities shall be utilized in the development of this unit.

EVIDENCES OF PUPIL GROWTH

HABITS OR SKILLS

Observes traffic signals and laws; enters and leaves trolley or bus in safe way; refrains from clinging to moving vehicles; refrains from hitch-hiking; obeys regulations for pedestrians when walking on highway; swims, roller-skates or ice-skates only in safe places; does not touch poison ivy and unknown fruits; recognizes and avoids harmful snakes; is careful with use of matches; does not crowd, push or trip others; refrains from playing practical jokes that may prove harmful; develops skill in handling the body with ease and quickness in unexpected situations (integrate with physical education); avoids injuring anyone when throwing snowballs, sticks, stones; is careful in the use of explosives or inflammable substances; refrains from sampling medicines that may be around the home; avoids running engine in the garage with the garage doors closed.

ATTITUDES

Is alert to risks in streets, in school and in the home; is considerate of the safety and protection of others; assumes responsibility in protecting self and others; is self-controlled in emergencies.

KNOWLEDGES

1. Safety hazards for the pupil enroute to school

Carelessness in observance of official signs and traffic regulations; crossing of streets; safety zones; police or light signals; entering and leaving trolley; entering and leaving bus; traveling on bicycle, roller-skates, etc.; clinging to moving vehicles; hitch-hiking; railroad and trolley crossings; playing with wires; poison ivy; eating unknown berries or other fruits; snakes.

2. Safety at school

a. Study of safety hazards and means of preventing accidents at schools.

- (1) Fire hazards,—stairways, accumulation of waste, matches, explosives.
- (2) In the building,—crowding, pushing, tripping, pulling chair.
- (3) On the playgrounds,—throwing balls, sticks, stones; nails, broken glass.

3. Safety in the home

a. Learn the most common causes of accidents in the home and means of prevention (care of injured studied later.)

- (1) Falls,—rickety supports, poor light, slippery footing, uncovered openings.
- (2) Burns,—from electricity, fire, steam, powder or hot water.
- (3) Asphyxiation and suffocation.
- (4) Poisons,—containers labelled, storage, spoiled foods.
- (5) Cuts,—tools and tool box, use of pocket knife, axe, opening cans and jars, broken glass, nails.
- (6) Collision with inanimate objects.
- (7) Playing in the streets.

SUGGESTED ACTIVITIES AND PROCEDURES

1. Study history of travel and transportation in America, noting special hazards of each mode.
2. Study of automobile fatalities in the United States; in Pennsylvania; note increase or decrease. Observe current newspaper reports. Discuss those which might have been prevented. Classify apparent causes.
3. Committees make studies of hazards to safety over several of the most widely used routes to school. Suggest ways of avoiding accidents.
4. Organize School Safety Patrol for school children.
5. Organize School Safety Council to study problems during the year.

6. Organize committee on School Safety to report problems to the Safety Council.
7. Learn accident hazards in your building. Make list of where accidents have occurred. Discuss means of prevention.
8. Individuals prepare talks on accidents that have occurred in the home, telling how they might have been prevented.
9. Study of local conditions to determine safe places for coasting, skating, and hiking. Plan school journey to obtain first hand information.
10. Secure cooperation of community authorities to have certain streets made available for coasting with safety.
11. Pupil leaders prepare talks on fire hazards with Christmas trees. Give talks to lower grades.
12. Study of safe practices in reference to Field Days, swimming, automobile trips, camping, Fourth of July.

TEXTBOOKS

WINSLOW and HAHN. *New Healthy Living*, Book II. Charles E. Merrill Company, New York. 1929. Chapter 26.

ADDRESS and BROWN. *Science and the Way to Health*. Ginn and Company, New York. 1929. Chapter 5.

BURKARD, CHAMBERS and MARONEY. *Personal and Public Health*. Lyons and Carnahan, New York. 1930. Chapter 19.

WHEAT and FITZPATRICK. *Everyday Problems in Health*. American Book Company, New York. 1933. Page 17, Problem 2.

II. The Selection of Foods

The emphasis in the seventh year should be on learning to choose foods wisely and establishing desirable habits in relation to eating. Other related phases will be developed in units to be covered in the tenth year.

EVIDENCES OF PUPIL GROWTH

HABITS OR SKILLS

Eats meals regularly, including breakfast; selects well balanced diet; eats adequate food; buys food economically; eats only clean food; refrains from "washing food down" with water without proper mastication; maintains good posture while eating; eats candy only after meals; uses no tea or coffee; eats leisurely; washes hands before eating; has good manners at the table.

ATTITUDES

Prefers to control weight on the basis of health rather than fashion; is interested in regulating diet on the basis of knowledge rather than whim, taste or appetite; is skeptical of foods fads; is habitually cheerful at meal time; desires to practice good manners at meals.

KNOWLEDGES

1. Why the body needs food
 - a. For growth and repair of the tissues.
 - b. To produce energy, including heat.
 - c. To regulate and protect body processes.
2. Food substances that supply the needs of the body
 - a. Protein, carbohydrates, fat, mineral salts, vitamins, water
 - (1) Functions of each.
 - (2) Common foods in which above substances are found.
 - b. Calorie value of the common foods needed by the body. Amounts of food in calories needed by growing boys and girls.
3. How the body prepares food for its use

The digestive tract

Simple structure and function of the mouth, the esophagus, the stomach, the glands of the alimentary tract, the large intestine, the small intestine.

4. Selecting a balanced diet
 - a. Choosing a balanced breakfast, lunch, dinner. Lunching between meals.
 - b. Selecting food in the school cafeteria.
 - c. Buying food economically.
 - d. Food fads (limited discussion).
 - e. Foods which may promote growth and development.
5. The relation of food to good nutrition.

Other factors influencing nutrition,—habits of eating, sleep and rest, activity, strains, age, climate (limited discussion).
6. Care of the digestive system
 - a. Cleaning and dental care of the teeth.
 - b. Drinking plenty of water.
 - c. Eating foods that provide bulk.
 - d. Refraining from eating unwholesome foods, e. g., fried foods, highly seasoned.
 - e. Effect of posture on digestion.
 - f. Habits of elimination.
 - g. Constipation.
 - h. Exercise.

SUGGESTED ACTIVITIES AND PROCEDURES

1. Suggested approach

- a. Class discussion: Why the football team is required to live on a certain diet.
- b. Compare the eating habits of Americans with people of other countries. Note factors which influence such habits. Integrate with geography. Discuss reasons for rapidly changing eating habits of Americans.
- c. Learn some of the eating habits and problems of the members of the class. Questionnaire may be used and reserved for further discussion later.

2. Choosing foods

- a. Pupils report on their selection of food for a day or more. Check frequently.
- b. Demonstrate weighing and measuring. Train leaders to assist during the year. Have each pupil weighed and measured. Pupils keep own record on chart. Check frequently during year. Emphasize gain in weight and height over a period of time rather than average height and weight. (The value of weight, height, and age standards is questionable.)

3. Suggested follow-up

a. Winter

- (1) Check on gain in weight and height; report to school nurse, school physician or parent, pupils showing excessive loss or excessive gain in weight.
- (2) Check on habits of eating. Re-emphasize need for forming desirable eating habits.

b. Spring

- (1) Study problems related to eating: at County Field Day; on picnics; during hot weather; on automobile trip; on camping trip; when swimming.

TEXTBOOKS

WINSLOW and HAHN. *New Healthy Living*, Book II. Charles E. Merrill Company, New York. 1929. Chapters 5, 6.

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III. The Health of the Respiratory System

It is to be remembered that tuberculosis is one of the leading causes of death for the age group 10-19, accounting for approximately 20 percent of the total; that while the mortality from tuberculosis in general has declined 36 percent in the last decade, the rate at the ages 15-25 has declined one half that amount or 18 percent in the same period; that it is more prevalent among girls than boys; and that the control of tuberculosis is largely dependent upon practices of healthful living. This unit necessarily contains much information on the prevalence of respiratory diseases. Particular care should be taken by the teacher not to create morbid introspective attitudes but rather to give reasons for the need of building bodily resistance to disease through the practice of desirable health habits.

EVIDENCES OF PUPIL GROWTH

HABITS OR SKILLS

Breathes with mouth closed; avoids dusty or smoky air; regulates ventilation properly in sleeping room and other situations; cooperates with the teacher in maintaining proper ventilation in the classroom; avoids poorly ventilated places; adjusts selection of clothing to weather conditions; avoids wearing extra wraps indoors; maintains good posture; develops desirable habits of elimination; maintains regular habits of sleep and rest; gets a sufficient amount of sleep regularly; eats a sufficient amount of food daily; selects balanced meals; gets some sunshine daily; works or plays out of doors daily; takes shower following vigorous physical activity; avoids over-fatigue; regulates willingly and intelligently the amount of social activities in which he participates; avoids contact with persons having colds; avoids coughing or sneezing in other person's face; covers a cough or sneeze with handkerchief; avoids spitting in public places; avoids use of common drinking cup or towel; keeps hands and finger nails clean; consults family physician when he has persistent cold; avoids use of patent medicines for colds; follows advice of physician; cooperates when necessary to have tonsils, adenoids or other physical defects corrected; has annual health examination, including the lungs, by family or school physician.

ATTITUDES

Enjoys being in good health; enjoys sunshine and fresh air; dislikes stale atmosphere; enjoys participation in outdoor recreative activities,—games, hiking, swimming, etc.; appreciates the need for good posture in relation to good health; is willing to use knowledge as a basis for determining behavior in regard to food selection and habits, rest, and adequate clothing of the right type; has consideration for others when infected with a cold; realizes the importance of care of the respiratory system; has a wholesome respect for germs of disease without undue fear of them; is not frightened by the existence of communicable respiratory diseases in the school but appreciates the value of preventive measures.

KNOWLEDGES

1. Why the body needs air.
2. The air passages
 - a. Location, *simple* structure and function of
 - (1) Nose, throat, larynx, trachea.
 - (2) Bronchial tubes.
 - (3) Lungs.
 - (4) Diaphragm and other muscles.
 - b. The breathing process
 - (1) Action during inspiration and expiration.
 - (2) Breathing an involuntary activity. Undesirability of regulating the rate of breathing by breathing exercises. Deep breathing produced by vigorous exercise of large muscle groups.
 - c. The effect of posture on the development and efficiency of the lungs.
 - d. The effect of tight clothing about the chest or abdomen on breathing.
3. How the body uses the air we breathe.
4. The need for pure air.

Oxygen in the air; pure air versus foul air; need for good ventilation, emphasizing—clean air, movement of air, humidity, temperature.
5. Impurities in the air
 - a. Dust in the home, school or in industry; its effect on the breathing passages; function of cilia; sanitary methods of cleaning.
 - b. Excessive smoke in cities; means of prevention.
 - c. Effect of inhaling cigarette smoke.
6. Protecting the respiratory system against disease
 - a. Nature's protection against germs in respiratory tract,—cilia, normal tonsils, adenoid tissue; general good health.
 - b. What we are responsible for—care and good health practices related to food, fresh air, sunshine, etc.
 - c. Provision for healthful surroundings in school and home.
7. Most common infections and obstruction of the respiratory tract
 - a. Common colds
 - (1) Economic factors; absenteeism among workers due to colds; school absences due to colds; colds,—a preventable disease.

- (2) Effects of colds on air passages; how colds are transmitted from one person to another; means of checking the spread of colds; care of person having a cold,—rest in bed, light foods, proper clothing, elimination, warmth, washing of hands, sneezing, coughing, avoiding public places (the school), etc.; dangers of spread of infection through exercise; dangers of spread of infection through Eustachian tube.
- b. Sinus infection
Location of sinuses; care of infected sinus.
- c. Obstruction in air passages
 - (1) Adenoids, enlarged tonsils.
 - (2) Abnormal growth conditions.
- d. Pneumonia,—a communicable disease
 - (1) Sources of infection.
 - (2) Protection from exposure to colds, measles, whooping cough.
 - (3) Care and prevention.
- e. Influenza or grip
 - (1) Seriousness of recent epidemics.
 - (2) Preventive measures.
- f. Tuberculosis
 - (1) Mortality rates in the United States; in Pennsylvania; mortality rates for high school age (increasing between ages 15-24, decreasing at every other age, more prevalent among girls than among boys).
 - (2) Need for development of resistance through general bodily vigor (Over 90 percent of all persons harbor tubercle bacilli at some time.)
 - (3) Conditions necessary for the development of tuberculosis (limited discussion).
 - (a) Presence of the germ—tubercle bacilli.
 - (b) Conditions favoring growth and development of the germs.
 - (4) Chief sources of infection.
 - (a) Discharges of person affected.
 - (b) Milk of tuberculous cows.
Raw milk, certified milk, pasteurized milk.
 - (5) Predisposing factors
 - (a) Heredity: do not inherit disease.
 - (b) Environment: homes—lack of sunshine, poor ventilation, crowded occupations.
 - (c) Habits of living; overwork, over-fatigue, improper food in inadequate amounts, lack of outdoor air and exercise.

(d) Race: susceptibility of Negroes, American Indians, Irish; non-prevalence among the Jews.

(6) Preventive measures

(a) Keep general health at high level; four chief factors,—food, rest, fresh air and exercise.

(b) Provide healthful surroundings in school and in home.

(c) Recognition of symptoms (Teacher avoid over-emphasis, limit to statement of symptoms without discussion.)

Loss of weight, night sweats, high temperature at intervals.

(d) Importance of consulting a physician.

(e) Importance of mental attitudes.

(f) Necessity for health examination.

1¹ Importance of annual examination.

2¹ Importance of early discovery of disease.

3¹ No examination for tuberculosis adequate without X-ray examination; tuberculin test.

(g) Social prevention

1¹ Education of the public.

2¹ Legislation.

3¹ Improved housing conditions.

4¹ Adequate hospital and sanatorium facilities.

5¹ Clinics.

6¹ Prevention of predisposing factors,—measles and whooping cough.

(h) Unscientific “cures”

1¹ No specific medicines.

2¹ No generally accepted vaccines or serums.

SUGGESTED ACTIVITIES AND PROCEDURES

1. Observe breathing at rest; after vigorous exercise such as in a game or short run; note difference in rate of respiration; note movement in inspiration and expiration; discuss part of body affected.
2. Learn how classroom is ventilated; discuss how pupils may help to maintain good ventilation; select committee to check on ventilation; keep record of temperature.
3. Pupil committee report on how cities are overcoming the smoke nuisance.
4. Integrate posture study with physical education; discover individuals with flat, sunken chest, suggest health practices to improve this condition; note improvement during the year.

5. Learn from reports of health examination recommendations in regard to removal of tonsils and adenoids. Try to secure 100 percent correction.
6. Study the life of Trudeau.
7. Study the care of children in open air schools. Emphasize the evidence of improvement through a hygienic regime of living.
8. Make a study of the prevalence of colds among classes; try to improve the situation; endeavor to have pupils with colds excluded from school; study absenteeism due to colds in school as a whole; check frequently during winter months.

TEXTBOOKS

- WINSLOW and HAHN. *New Healthy Living*, Book II. Charles E. Merrill Company, New York. 1929. Chapters 7, 9.
- ANDRESS and BROWN. *Science and the Way to Health*. Ginn and Company, New York. 1929. Chapter 4.
- BURKARD, CHAMBERS and MARONEY. *Personal and Public Health*. Lyons and Carnahan, New York. 1930. Chapters 7, 9, 10.
- GREGG and ROWELL. *Health Studies—Personal Health*. World Book Company, Yonkers-on-Hudson, New York. 1932. Chapter 11.
- WHEAT and FITZPATRICK. *Everyday Problems in Health*. American Book Company, New York. 1933. Problems 14-18.

IV. Stimulants and Narcotics

This unit is so important that it is suggested that three one hour or six half-hour periods be devoted to it in each of the two years. Facts and scientific evidence should be given first consideration. Avoid arousing curiosity that may lead to testing effects of stimulants and narcotics. Appeal to pupils' desire for fitness in sports, efficiency in play or work, vigorous health and high character qualities.

EVIDENCES OF PUPIL GROWTH

HABITS OR SKILLS

Uses no tea or coffee; does not use tobacco in any form; avoids the use of alcoholic beverages; avoids the use of stimulants in any form when fatigued; does not use drugs for any purpose except when prescribed by reputable physician; avoids the use of patent medicines except when prescribed by reputable physician; seeks pleasure in wholesome and healthful forms; avoids the companionship of those who use alcohol or other narcotics; obeys the law in regard to alcohol and drugs.

ATTITUDES

Appreciates personal responsibility to himself, to his family and to society for refraining from the use of alcoholic beverages and drugs; desires to avoid smoking until he has attained full

growth and development; desires to maintain his own efficiency in school or work; desires to maintain his self respect and the respect of others; wishes to obey the laws of the United States; desires to use beverages that have food value during the period of growth and development rather than to use tea or coffee.

KNOWLEDGES

1. Stimulants and narcotics

a. Principal ones used

- (1) Stimulants: coffee and tea.
- (2) Narcotics: tobacco, alcohol and drugs.

b. Popular reasons for usage

- (1) Social custom; to allay the sense of fatigue; to forget unpleasant realities; for medicinal purposes; to try new sensations; liking for the flavor; habit.

c. Tea and coffee

(1) Source

Tea,—dried tea leaf; coffee,—the coffee bean roasted. Used as beverages.

(2) Harmful elements

Caffein and tannic acid found in both tea and coffee.

(3) Effects on the individual

Persons differ in response to caffein, largely due to differences in nervous system; powerful stimulant of the heart and nervous system; tannin—affects mucous membrane of stomach; stimulating effects undesirable for growing boys and girls; moderate usage may not be harmful in adult life; effects of habit are not degrading.

d. Tobacco

(1) Source

Dried leaf of tobacco plant. Used for smoking, chewing and snuff.

(2) Harmful elements

Nicotine: a poison; a narcotic; habit forming; body may become accustomed to small quantities.

(3) Effects on individual

- (a) Interferes with growth at age when strength and vigor are needed for development; needless diversion of bodily processes required for repairing physical or mental injuries caused by tobacco; impairs nervous stability; increases the heart rate; retards mental processes,—accuracy; irritates mucous membranes in the nose and throat causing "cigarette cough" and hoarse voice; if habit is formed causes great discomfort if smoking is not convenient.

- (b) Same effects true for girls as for boys
No scientific evidence that greater harm is done.
- (c) Smoking in adult life in moderation less harmful.
- (4) Effects on society
 - (a) Lowers efficiency in school or occupation
 - 1¹ Athletics and smoking.
 - 2¹ Scholarship and smoking.
 - (b) Financial drain—money could be used for more wholesome purposes.
- (5) Current problems
 - (a) Scientific investigations of the effects of smoking.
 - (b) Popular beliefs in statements of advertisements of cigarettes.

e. Alcohol

- (1) Source
 - Contained in wines, beer and whiskey which are manufactured from fermented fruits and grains.
- (2) Usage
 - As a beverage; for medicinal purposes.
- (3) Harmful element
 - Alcohol—a narcotic, tends to deaden or paralyze the nerves; not a stimulant.
- (4) Effects on individual
 - (a) Future
 - 1¹ Shortens life expectancy
Studies of insurance companies.
 - 2¹ Increases liability to death from kidney disease, pneumonia and suicide.
 - 3¹ Increases tendency to mental illness.
Studies of statistics of patients in state hospitals.
 - (b) Bodily effects
 - 1¹ Throws abnormal strain on liver and kidneys.
 - 2¹ Injures or deadens nerve and brain cells, resulting in
 - a¹ Inability to control muscular action (dangers of accidents).
 - b¹ Lessening of restraint.
 - c¹ Weakening of memory, judgment, and ability to think clearly.
 - d¹ Loss of control of emotions.
 - 3¹ Lowers bodily temperature
Explorers in Arctic regions forbidden use.
 - 4¹ Increases pulse rate.
 - 5¹ Reduces physical strength and endurance.

6¹ Creates a craving for alcohol (a habit-forming narcotic).

- (5) Effects on society
 - (a) Earning capacity of individual diminished.
 - (b) Lowers efficiency in school or occupation.
 - (c) Responsible for much unhappiness, poverty, crime, disease.
 - (d) Safety hazard
 - Rules for motorists, railroads, air pilots, etc.
 - (e) Effects on future generations.
- (6) Current problems
 - (a) Scientific investigations of the effects of alcohol.
 - (b) Alcohol and athletics.
 - (c) The Eighteenth Amendment
 - 1¹ Why it was passed.
 - 2¹ Responsibilities of a good citizen.
 - 3¹ Need for cooperation.
 - (d) Education of the public.
 - (e) Financial aspects of the alcohol question.

f. Drugs

- (1) Sources
 - (a) Opium—from certain species of poppy.
 - (b) Morphine—a derivative of opium.
 - (c) Heroin—manufactured.
 - (d) Cocaine—from leaves of coca plant and coal-tar products.
- (2) Usage
 - (a) Medicine—used with care because of dangers of forming habit.
 - (b) By drug addicts.
- (3) Effects on individual
 - (a) Habit becomes so strong individual will do anything to satisfy his craving.
 - (b) Changes character—lose self-respect, honor, ambition. May lie, steal, or commit crime to obtain drug.
 - (c) Loss of health.
 - (d) Drain on finances.
 - (e) Difficulties in breaking the habit and curing the individual.
- (4) Social effects
 - (a) Many crimes committed by users.
 - (b) Loss of social responsibility.
 - (c) Responsible for much poverty and unhappiness in families.

(5) Current problems

- (a) The smuggling of narcotics into this country; drug rings.
- (b) Hospital care of drug addicts.
- (c) Tempting young boys and girls.
- (d) Legislation.
- (e) The prevalence of the patent medicine habit
 - 1¹ Harmful drugs used as ingredients.
 - 2¹ Dangers of use without prescription of a physician.

SUGGESTED ACTIVITIES AND PROCEDURES

1. Committees report on the studies of experiments and observations on the effects of smoking and alcohol on scholarship and athletics.
2. Compare the action of food and alcohol in the body to show why alcohol should not be classed as a food.
3. Demonstrate how tea and coffee should be prepared to minimize their harmful effects.
4. Pertinent questions for discussion: Why can your father indulge in smoking in moderation without apparent harm? Why does a boy who smokes get "winded" easily in athletics? What are the arguments for and against girls' smoking.
5. Committees make a study of what national organizations are doing to control (1) the use of alcohol, (2) the use of narcotics.

TEXTBOOKS

- WINSLOW and HAHN. *New Healthy Living*, Book II. Charles E. Merrill Company, New York. 1929. Chapter 15.
- ANDRESS and BROWN. *Science and the Way to Health*. Ginn and Company, New York. 1929. Chapter 20.
- BURKARD, CHAMBERS and MARONEY. *Personal and Public Health*. Lyons and Carnahan, New York. 1930. Chapter 17.
- GREGG and ROWELL. *Health Studies—Personal Health*. World Book Company, Yonkers-on-Hudson, New York. 1932. Chapter 9.
- WHEAT and FITZPATRICK. *Everyday Problems in Health*. American Book Company, New York. 1933. Problem 20.

V. Physical Activity and Posture

The material on physical activity presents the physiological basis for such activity. This information should be most helpful to the teacher in the selection of the right type of exercise for various age groups.

Posture has been presented from the positive viewpoint and the emphasis has been placed upon normal rather than abnormal posture. Much can be accomplished in securing good posture through acquiring

better muscle tone and by giving more attention to the "feel" of correct posture. All conditions serious enough to require corrective attention, should be referred to a physician.

EVIDENCES OF PUPIL GROWTH

HABITS OR SKILLS

Plays or works actively out of doors daily; tries to have at least two hours of physical activity daily; learns to take part in group games and contests; develops skill in one or more recreative outdoor sports (hiking, tennis, swimming, skating); plays fair; is a good loser or good winner; avoids excessive fatigue; refrains from taking part in strenuous sports or athletics during the menstrual period; continues wholesome habits in relation to selection of foods, eating habits, rest; refrains from the use of alcohol and tobacco; avoids worry, hurry or over-excitement; maintains good posture in standing, walking, sitting; develops skill, poise and control of the body in many activities; takes corrective exercises if prescribed.

ATTITUDES

Enjoys participation in games and sports out of doors; prefers participating in recreative activities rather than being a spectator; enjoys the social contacts with others in games and sports; appreciates the need for vigorous daily exercise of the large muscle groups; walks rather than rides when distances are not too great; does not "cut" physical education classes; appreciates the values of good posture; takes pride in maintaining good carriage of the body in any activity; is persevering in improving his own physique and posture.

KNOWLEDGES

PHYSICAL ACTIVITY

1. Desire for physical activity a part of nature's plan for growth, development and the maintenance of health
 - a. Observe: feelings when compelled to sit still for any length of time in school, in church; little children told to sit still.
 - b. Observe forms of physical activity: puppies and kittens; babies; boys and girls; adults. Compare apparent amount of time each group devotes to exercise willingly, in work or play.
2. Physical activity involves the use of bones and muscles.
 - a. The bones
 - (1) Composition of bones
 - (a) Cartilage.
 - (b) Mineral and animal matter.
 - (c) Marrow.
 - (d) Periosteum.

(2) Joints

- (a) Kinds.
- (b) Uses.
- (c) Ligaments.
- (d) Use of sac containing fluid in some joints.

(3) The uses of bones

- (a) For attachment of muscles.
- (b) For support.
- (c) For protection.
- (d) For movement.

(4) Essentials for growth and development of bones

- (a) Proper nourishment, especially bone-building vitamins and minerals, (lime and phosphorous).
- (b) Sunshine (helps body to make its own bone-building vitamins).
- (c) Refraining from use of tobacco while bones are growing.
- (d) Non-use of alcoholic drinks.
- (e) Correction of some physical handicaps.
- (f) Correct use of bones
Posture (see posture p. 27).
- (g) Proper care or correction
 - 1¹ Dislocation, sprains, strains, fractures (Discussed in detail under "Care of the Injured").
 - 2¹ Curvatures: lateral, posterior.
 - 3¹ Weak feet.

b. Kinds of muscles

(1) Voluntary

- (a) Include muscles of arms, legs, trunk, etc.
- (b) *Simple* structure.
- (c) Function.
 - 1¹ To produce movement.
 - 2¹ To support the body.
 - 3¹ To protect certain parts of the body.
- (d) How the muscles produce action
 - 1¹ Contractility.
 - 2¹ Tendons.
 - 3¹ Arrangement in pairs.
 - 4¹ Neuro-muscular connection (simplified).

(2) Involuntary

- (a) Control of the heart, circulatory system, breathing, digestion.
- (b) *Simple* structure.

- (c) Involuntary muscles depend on exercise of the large voluntary muscles for strength and efficient functioning
 - ¹ Emphasize that the heart is a muscle and can be strengthened by exercise of big-muscle groups.
- 3. The need for activity of the big-muscle groups
 - a. To improve muscle tone and strength
 - (1) Relation to posture—ptosis especially.
 - (2) Need for nutritious diet.
 - (3) Effect of alcohol and tobacco.
 - b. To promote growth and development of the vital organs and systems of the body
 - Need for recognition and practice of this principle during the period of growth and development of boys and girls.
 - c. To stimulate the functioning of the vital systems of the body
 - Circulatory, respiratory, nervous, digestive (non-technical discussion).
 - d. To develop skill in control of the body in many activities.
 - e. To increase mental alertness through removal of fatigue products and increase of food and oxygen supply.
- 4. Selecting desirable types of big muscle activity
 - a. Enjoyable—work or play
 - (1) Effect of emotional reaction on functioning of the systems of the body (non-technical).
 - (2) Advantages of plays, games and sports versus calisthenics.
 - (3) Need for wholesome emotional expression.
 - b. Out of doors—sunshine.
 - c. Companionship of others.
 - d. Amount needed in relation to age
 - The adolescent—2 hours daily.
 - e. Amount needed in relation to occupation.
 - f. The financial aspects of different forms.
 - g. The need for development of interest and skills in some form of recreative activity (involving big-muscle activity) which will tend to be carried on all through life.
- 5. Conditions limiting amount and type of physical activity
 - a. Heart defect—importance of discovery through health examination. Dangers of participating in vigorous athletics.
 - b. Tuberculosis—importance of discovery through health examination. Dangers of participating in athletics.
 - c. Recovery from illness.
 - d. Cripple.
 - e. Malnutrition—importance of rest.
 - f. Menstruation
 - (1) Avoid undue fatigue, work or strain.

- (2) Exercise in moderation desirable.
- (3) Avoid vigorous running and jumping.
- g. Age of growth and development
 - Dangers of strenuous athletics, football, basketball in the junior high school because vital organs not fully developed.
 - Problem of individual growth.
- h. Over-fatigue
 - (1) Fatigue products accumulate more rapidly than can be removed by the blood.
 - (2) Importance of rest.
- i. Strains and muscle soreness.
- 6. Corrective features of exercise
 - a. Relieves constipation.
 - b. Helps to prevent the accumulation of excess fatty tissue.
 - c. Stimulates the appetite and improves digestion.
 - d. Corrective exercises for postural defects.

POSTURE

- 1. Values of good posture
 - a. The pupils' reasons for desiring good posture
 - (1) To improve his appearance—clothes look better.
 - (2) To make a good impression—in school, social and business life. Conveys impression of energy, alertness, self-respect.
 - (3) Boys—in imitation of athletes and soldiers.
 - b. Other values
 - (1) Health: to allow space for normal growth, development and efficient functioning of the internal organs; to promote normal growth and development of bones and muscles.
 - (2) Mental: mental states reflected in posture and vice versa.
 - (3) Physical: cultivate ease, poise, grace, certain amount of relaxation, a readiness for action.
- 2. Common postural defects
 - Head forward, flat chest, round shoulders, hollow back, lateral curvature, relaxed abdominal walls, flat or weak feet.
- 3. Some causes of poor posture
 - Note: Certain of these will be discussed in greater detail under other units.
 - a. Poor nutrition: growth and development of bones, muscles and organs affected by habits and practices in relation to foods.
 - b. Mental attitudes: depression, carelessness, discouragement, etc., reflected in posture.
 - c. Habits: faulty habits of standing, sitting, lying, walking.
 - d. Lack of muscular strength.

OUTLINE OF HEALTH INSTRUCTION AND PHYSICAL

CONDITIONS FOR GROWTH AND DEVELOPMENT	OBJECTIVES	ACTIVITIES AND
	Help Pupils To build emotionalized attitudes toward worthy practices; To make desirable adjustments to health situations in their environment; To enjoy favorable conditions and practices; RELATED TO	Type situations providing opportunities for health practices AT SCHOOL
Favorable Environment	1. Cleanliness 2. Fresh air and sunshine	1. Morning survey Use of drinking fountain Care of any food in school room 2. Adjustment of shades Reading of thermometer Attention to ventilation Regulating clothing for temperature in room
Satisfactory Nutrition	3. Wholesome food 4. Necessary rest and sleep 5. Wholesome play and work involving big muscles and developing physical skills	3. Care of lunch box at school Preparation for lunch Choice of food at the school cafeteria Eating of lunch Weighing of children 4. Relaxation periods Rest period for pupils when recommended by physician 5. Running, tossing or throwing large balls Construction with wood Blackboard or easel drawing
Opportunity for Expression	6. Good posture	6. Adjustment of seats and desks (size and illumination) Sitting and standing Reading and writing Passing to classes
Protection from Drains on Vitality ..	7. Prevention, detection and correction of health handicaps 8. Prevention of communicable disease and other illness 9. Suitable clothing	7. Adjustments for hearing and vision of handicapped children Wearing of glasses prescribed Periodical health examination 8. Use of handkerchief Use of pencil, textbook Use of school toilet Washing of hands after visiting toilet 9. Removal of outside wraps in school Wearing wraps outdoors
Protection from Physical Injury	10. Safety education 11. First aid measures	10. Development of pupil responsibility for care of desks, wraps, and material used by children Fire Drill. Play activities 11. Giving first aid to minor injuries Keeping calm in emergencies
Provision for Desirable Emotional and Social Experiences	12. Non-use of stimulants and narcotics 13. Wholesome personality	12. Satisfying thirst with water Choosing wholesome drinks at cafeteria 13. Facing experiences squarely and making adjustments cheerfully and satisfactorily to school situations, e. g., meeting new pupils and teachers failing to win games, or solving problems

PHYSICAL EDUCATION FOR ELEMENTARY GRADES

PROCEDURES	EVIDENCES OF PUPIL GROWTH IN TERMS OF ATTITUDES, PRACTICES OR SKILLS, AND KNOWLEDGE
pe demonstrations or dramatizations health practices AT HOME and IN E COMMUNITY.	
Preparation for school Preparation for body bath	1. Prefers to live in clean environment Is developing habits of cleanliness to make adjustments for better living Increasingly learns why cleanliness is necessary for the maintenance of good health
Adjustment of windows for night	2. Enjoys fresh air Participates in outdoor activity when weather permits Increasingly learns the value of fresh air and sunshine
Preparation for breakfast Eating a wholesome breakfast Packing a school lunch	3. Likes to eat and drink wholesome foods Tries to form tastes for other wholesome foods and drinks available for him Increasingly learns why good nutrition is necessary for growth and development
Preparation for bed Care of the bed	4. Appreciates benefits of adequate rest and sleep Sleeps required hours necessary for his best development Increasingly learns the importance of adequate sleep and rest and understands conditions under which sleep is most beneficial
Use of balls as throwing, catching pushing, kicking Home tasks as sweeping, dusting, making beds, marketing	5. Finds pleasure in vigorous play and work activities by himself and with the group (should be adapted to one's ability). Is gaining muscular coordinations through play and through the use of tools Increasingly learns values of recreational activities as well as those of worthwhile tasks
Choosing suitable chair at home Position taken for various types of work at home	6. Appreciates the importance of good posture Habitually sits, stands and walks well Increasingly learns advantages of good posture (The first and last of this group are to be stressed in grades above the second)
Reading at home (light) Selecting a pair of shoes Selection, use and care of toothbrush Care and adjustment of glasses	7. Desires to keep one's body in the best condition possible Develops practices that maintain good health and avoids those that may cause health handicaps Increasingly learns why health practices and also knowledge of one's health habits are necessary for the best maintenance and protection of the body
Hand washing Observation of regulations for quarantine. Use of individual drinking cups, silverware, or towel	8. Wishes to protect not only himself but others from communicable disease Avoids practices which may help to spread communicable disease Increasingly learns how health may be maintained in the community and his share in it
Selection and care of clothing	9. Finds satisfaction in wearing suitable clothing for school activities Gives clothing proper care Increasingly learns how and why to select suitable clothing
Crossing street Going to school the safest way Walking on highway. Smothering flames when clothing is on fire	10. Is willing to work in cooperation with others for safety Follows safety precautions Increasingly discovers safer ways of carrying out the daily program of living and learns necessity for practicing measures of safety
First aid for minor injuries at home Calling a physician	11. Takes precaution in unnecessary risks with minor injuries Seeks first aid remedies when injured Increasingly learns how to give simple first aid treatment and the necessity of calling a physician in case of major accidents
Importance of safe water Training of Scouts or athletes	12. Desires to use only beverages that have food value and to avoid beverages or narcotics that hinder growth and development Develops skills that one may participate with satisfaction in wholesome activities adapted to his physiological development Knows the effect of the use of tobacco, alcohol and other narcotics, especially on the growing boy or girl (in upper grades)
Facing disappointment when pleasure trip is postponed Making adjustments in a new home Showing self-control in public when subjected to rudeness	13. Is willing to face problems that come into his experience Increasingly adapts his way of living to meet the needs for becoming a desirable and useful citizen Increasingly learns the value of self-control, cheerfulness and poise together with physical well being in maintaining mental health

- e. Clothing: tight fitting clothing; too much weight supported by shoulders; ill-fitting shoes, high heeled shoes. (Points of a good shoe will be discussed in greater detail under "Choice and Care of Clothing.")
 - f. Carrying books, newspapers or other weights habitually on one side.
 - g. Furniture
 - (1) At home: using dining room chairs, study chairs and tables of improper size and height; sleeping on high pillows.
 - (2) At school: desks too high, too low; seats too high, too low, seat too far away from desk; desk overlapping seat too far.
 - h. Improper lighting: at school; at home.
 - i. Physical defects: defective vision; defective hearing.
 - j. Occupation.
 - k. Disease or illness: rickets; tuberculosis; infantile paralysis; defective muscle or ligament tissue; prolonged illness.
4. Effects of poor posture.
- a. Disturbance of functioning of digestive, respiratory, excretory, nervous systems. May result in constipation, nervousness, indigestion, headache, fatigue, lack of strength and endurance. (Present the fact that the body is capable of making adjustments to bad posture.)
 - b. Mental depression.
 - c. Strain on certain muscles and ligaments; over or under growth and development of certain muscles.
 - d. Resistance to disease lowered.
5. Improvement of posture
- a. Removal of cause so far as possible.
 - b. Improvement in habits especially while boy or girl is growing.
 - c. Build strength in muscles that hold body in good posture.
 - d. Maintain happy, cheerful disposition.

SUGGESTED ACTIVITIES AND PROCEDURES

1. Prepare a discussion based on observation of the physical activity habits of animals, babies and children, and adults, noting especially (a) nature of activity, play or work; (b) attitude—enjoyment or dislike; (c) approximate amount daily.
2. Each pupil present a plan by which he can secure approximately two hours daily of big-muscle activity, i. e., walking to school, physical education classes, athletics, work at home, sports outside of school, etc.
3. Each pupil choose a type of big muscle recreative activity in which he would like to improve his skill during the year. If possible, try to select one that is appropriate for each season,—swimming, hiking, tennis, skating, horseback riding. Try to

provide opportunity for the development of the skills involved through the physical education program. Check frequently throughout the year.

4. Study opportunities which the community provides for recreation, (a) spectator type, (b) participation type. Discuss needs.
5. Study examples of good posture: American Indian; art—especially in sculpture; soldiers.
6. Try to have the physical education teacher cooperate in a study of the posture needs of the class.
7. Adjust seats to fit individual pupils.

TEXTBOOKS

WHEAT and FITZPATRICK. *Everyday Problems in Health*. American Book Company, New York. 1933. Problems 8, 9.

GREGG and ROWELL. *Health Studies—Personal Health*. World Book Company, Yonkers-on-Hudson, New York. 1932. Chapters 2, 3.

WINSLOW and HAHN. *New Healthy Living*, Book II. Charles E. Merrill Company, New York. 1929. Chapter 4.

ANDRESS and BROWN. *Science and the Way to Health*. Ginn and Company, New York. 1929. Chapter 15.

BURKARD, CHAMBERS and MARONEY. *Personal and Public Health*. Lyons and Carnahan, New York. 1930. Chapters 3, 4.

VI. The Control of Infection

This is probably one of the most important units to be studied. Emphasis should be placed upon personal cleanliness and the need of immediate attention to all cuts and abrasions and the importance of immunization against infectious and communicable diseases.

EVIDENCES OF PUPIL GROWTH

HABITS OR SKILLS

Keeps skin clean; tries to keep skin free from abrasions; does not put fingers in mouth; washes hands after visiting the toilet and before eating; eats only clean food; is careful of the source of drinking water; uses only safe milk; does not eat spoiled food; avoids the use of common towel or drinking cup; uses the drinking fountain in sanitary way; uses toilet facilities in sanitary manner; avoids unsanitary toilet facilities; coughs or sneezes into handkerchief; does not expectorate (uses handkerchief); cooperates with parents in being immunized; observes isolation or quarantine measures; avoids contact with person who has communicable disease; uses proper precautions when in contact with communicable diseases; avoids crowds during an epidemic; helps to keep flies and mosquitoes out of house; has defective teeth properly cared for; endeavors to develop general bodily vigor as an aid to resistance to disease.

ATTITUDES

Regards it as a part of one's responsibility to protect others from infection; is willing to be immunized against communicable disease for which reliable means of immunization have been discovered; is interested in the protection of food, milk and water supply; desires to share responsibility of maintaining home and school in sanitary condition; enjoys being in good health rather than ill; appreciates the importance of protecting one's self and others from infection.

KNOWLEDGES

1. The story of the conquest of disease
 - a. The prevalence of disease plagues.
 - b. The old superstitions and practices.
 - c. The invention and use of the microscope.
Story of Leeuwenhoek.
 - d. The germ theory of disease.
Contribution of Louis Pasteur.
2. Germs
 - a. Bacteria
 - (1) Kinds
 - (a) Non-pathogenic—helpful in plant and animal life
 - (b) Pathogenic bacteria
 - 1¹ Characteristics of
 - a¹ Size.
 - b¹ Single celled.
 - c¹ Shape
 - 1² Cocci—spherical.
 - 2² Bacilli—rod.
 - 3² Spirilla.
 - d¹ Reproduction
 - 1² Subdividing.
 - 2² Rapidity.
 - 3² Conditions favorable for reproduction
 - a² Heat, moisture, food.
 - b² Formation of spores when conditions not favorable.
 - e¹ Production of toxins
 - 1² Local—inflammation, pus, etc.
 - 2² Distributed through other parts of body through blood stream.
 - 2¹ Diseases produced by pathogenic bacteria
Diphtheria, typhoid fever, tuberculosis, cholera, tetanus, pneumonia and meningitis.
 - b. Protozoa
 - (1) Resemble bacteria in that they cause disease.

- (2) Depend on intermediary host to gain entrance to body,
—insect or animal
 - (a) Tsetse fly—sleeping sickness.
 - (b) Rat and squirrel fleas—bubonic plague.
 - (c) Mosquito—yellow fever, malaria.
3. How germs are transmitted
 - a. By human beings
 - (1) Direct contact.
 - (2) Contact with articles used by infected person.
 - (3) Contact with body discharges of infected person.
 - b. By animals and insects
 - (1) Animals having the disease transmit it to man,—anthrax, intestinal parasites, glanders, bubonic plague.
 - (2) Act as intermediary host or mechanical carriers of germs.
Flies, mosquitoes, lice, rats, squirrels, tsetse fly.
 - c. Through the air
Exaggeration of the importance of dust as carrier of disease germs.
 - d. By means of droplets
 - (1) Mucus, saliva from infected person.
 - (2) Dangers in crowds.
 - (3) Value of sunlight.
 - (4) Dangers of spitting, coughing, sneezing.
 - e. Through food or water.
4. How germs enter the body
 - a. Through the skin
Skin abrasions, scratches, etc.
The importance of cleanliness and use of disinfectant.
 - b. Through the mouth
 - (1) Unclean hands.
 - (2) Infected food, milk, water.
 - (3) Breathing
 - (a) Pneumonia.
 - (b) Colds.
 - (c) Tuberculosis.
 - c. Mucous membranes
 - (1) By direct contact.
 - (2) By contact with infected towels, clothing, etc.
 - d. Adenoids and diseased tonsils
 - (1) Relation to scarlet fever and diphtheria.
 - (2) Infection spread to other parts of body.
 - (3) Necessity for removal of diseased tonsils and adenoids.

- e. Abscessed teeth
 - (1) Infection spread to other parts of body.
 - (2) Necessity for proper care.
- 5. The action of germs in the body
 - a. Process of getting nourishment and giving off waste.
 - b. Reproduce and die.
 - e. Chemical substances produced by germs harm body.
Some give off toxin or poison while living, others when they die.
- Damage to body
 - (1) Local
 - (a) Inflammation—indicated by redness, swelling, heat, pain.
 - (b) Pus—in boils and abscesses.
Dangers of spreading.
 - (2) Extension of infection—may follow channel of body—
as from throat to ear.
 - (3) Blood or lymph stream—carried to all parts of body.
- 6. The body's means of protection against infection
 - a. Germicidal powers of saliva and nasal secretions.
 - b. Cilia in air tubes in lungs.
 - e. Hairs in nose.
 - d. Tears in eyes.
 - e. The work of the leucocytes.
 - f. The development of antibodies.
 - g. Natural immunity.
 - h. Acquired immunity through having disease.
- 7. Destruction of germs outside of the body; uses of
 - a. Sunlight.
 - b. Cold (some bacteria).
 - e. Wind (drives bacteria away).
 - d. Exposure to air.
 - e. Heat.
 - f. Chemicals.
 - g. Antiseptics and germicides.
 - h. Soap and water.
 - i. Modern methods of disinfection
 - (1) Sun, fresh air, soap and water versus fumigation.
 - (2) State regulations in regard to disinfection in communicable disease.
- 8. Modern methods of controlling communicable disease
 - a. Careful reporting.
 - b. Quarantine.
 - e. Isolation.

- d. Artificial immunity
 - (1) Toxin-antitoxin.
 - (2) Antitoxin.
 - (3) Other serums and vaccines
 - (a) Rabies, small pox, typhoid and others.
 - e. Immunity tests
 - (a) The Schick.
 - (b) The Dick.
 - f. Precautions during epidemics.
 - g. Importance of individual cooperation.
9. Control of communicable diseases
- a. Study of gains made in the following diseases and specific measures used
 - (1) Tuberculosis (review).
 - (2) Pneumonia, influenza, colds (review).
 - (3) Scarlet fever.
 - (4) Diphtheria.
 - (5) Small pox.
 - b. Discussion
 - (1) Relations of children's diseases to more serious sickness in later life, predisposition to morbidity.
 - (2) Complications in children's diseases.
 - (3) Fallacy—that children have to have them.
10. Responsibility for helping in the control of infection
- a. The individual's responsibility.
 - b. The responsibility in the home.
 - c. The responsibility of the school.
 - d. The responsibility of the community.
 - e. What the State does.

SUGGESTED ACTIVITIES AND PROCEDURES

1. Committee obtain statistics and present report of the status of certain communicable diseases over a period of five years. Discuss measures undertaken by community to control the diseases.
2. Invite the school nurse to talk on some needed phase of communicable disease.
3. Committee learn details of any recent communicable disease in the community.—its origin, how it spread, what measures were taken to prevent the spread.
4. In the absence of a school nurse discuss what the value of a school nurse would be to the community in helping to control communicable disease.
5. Committees present brief reports on desirable practices in regard to the following as they affect the control of infection (1) the

use and care of drinking fountains, (2) the use of towels in the shower room and lavatory, (3) methods of cleansing dishes in the school cafeteria.

6. Individuals prepare brief reports of the work of (1) Louis Pasteur, (2) Joseph Meister, (3) Edward Jenner, (4) Walter Reed, (5) Joseph Lister, (6) Bela Schick, (7) George F. Dick.

TEXTBOOKS

WHEAT and FITZPATRICK. *Everyday Problems in Health*. American Book Company, New York, 1933. Problems 4, 5.

WINSLOW and HAHN. *New Healthy Living*, Book II. Charles E. Merrill Company, New York. 1929. Chapters 17-21.

ANDRESS and BROWN. *Science and the Way to Health*. Ginn and Company, New York. 1929. Chapter 3.

BURKARD, CHAMBERS and MARONEY. *Personal and Public Health*. Lyons and Carnahan, New York. 1930. Chapter 14.

VII. Care of the Special Senses

Special attention should be given to the preservation of the special senses through the observance of care in their use. When impaired, emphasize the need for immediate medical attention as delay, in most cases, means added impairment and, too often, loss of vision or hearing.

THE SENSE OF VISION

EVIDENCES OF PUPIL GROWTH

HABITS OR SKILLS

Adjusts artificial or natural light to best advantage when reading or doing close work; maintains good posture and holds reading material in correct position; refrains from reading when lying down; avoids, so far as possible, using the eyes when they are tired, strained, or when ill; rests the eyes frequently when doing close work or when reading; refrains from rubbing eyes; has skill in removing foreign particles from the eyes; avoids use of the common towel; uses only clean handkerchief on eyes; refrains from use of patent medicines or consulting quacks in case of eye troubles; protects the eyes in occupational hazards; wears glasses when prescribed by oculist; consults only reputable physician for treatment of eyes; follows advice of physician; is considerate of those who cannot see well.

ATTITUDES

Appreciates the need for personal care of the eyes; considers protection of the eyes more important than appearance when necessary to wear glasses; appreciates the need for frequent examination of the eyes by an oculist; desires to follow the advice of oculist in the care of the eyes; when oculist is not available prefers to employ the services of a competent physician.

KNOWLEDGES

1. The importance of good vision
 - a. The eyes—the medium for carrying to the brain messages of form, color, movement; one of the chief avenues of learning.
 - b. The many uses of the eyes in gaining an education; in learning to live in the world about us.
 - c. The prevalence of defective vision among school children; the resultant handicaps in education; indications of the need for conservation of vision.
 - d. Changes in living conditions which have added new hazards to the eyes.
 - (1) The extensive use of printed material.
 - (2) Transportation over long distances—reading enroute.
 - (3) The use of fine machinery.
 - (4) Crowded living conditions resulting in limited or poor light.
2. The structure and *function* of the parts of the eye
 - a. The exterior parts of the eye
 - (1) The eyelids and eyelashes.
 - (2) The eyebrows.
 - (3) The lachrymal glands and duct.
 - (4) The conjunctiva.
 - (5) The muscles.
 - (6) The bony socket.
 - b. The interior parts of the eye
 - (1) The coats of the eyeball.
 - (a) The sclerotic and cornea.
 - (b) The choroid.
 - (c) The retina.
 - (2) The iris and pupil.
 - (3) The ciliary muscle.
 - (4) The chrystalline lens.
 - (5) The aqueous humor.
 - (6) The vitreous humor.
 - (7) The optic nerve.
3. The process of vision
 - a. Comparison of the mechanism and functioning of a camera with the eye.
 - b. Refraction of light.
 - c. The act of accommodation to light and distance.
 - (1) Elasticity of the lens.
 - (2) Action of the ciliary muscle.
 - d. Transmission of the stimulus by the optic nerve to the brain.
 - e. Interpretation of message in brain.

4. The meaning of normal vision.
5. The need for correction of abnormalities of vision
 - a. Causes, symptoms, effects on health *and* vision, and means of correction in cases of
 - (1) Nearsightedness (myopia).
 - (2) Farsightedness (hyperopia).
 - (3) Astigmatism.
 - (4) Crossed eyes (strabismus).
 - (5) Eyestrain.
 - (6) Color blindness.
 - b. Testing acuity of vision
Explanation of the use of the Snellen Eye Charts.
6. Protection and care of the eyes
 - a. Common disorders
 - (1) Sties.
 - (2) Granulated eyelids—simple type.
 - (3) Conjunctivitis.
 - (4) Pink eye (communicable).
 - (5) Trachoma (highly communicable).
 - (6) The effects of general ill health on vision.
 - (7) The effects of the presence of certain diseases elsewhere in the body on the health of the eyes.
 - b. Injuries
 - (1) Foreign particle in eye—methods of removing.
 - (2) Black eye—treatment for.
 - (3) Occupational injuries.
 - c. Protecting the eyes through proper use
 - (1) When reading
 - (a) Arranging good light
 - 1¹ From steady source.
 - a¹ Moving trains and cars.
 - 2¹ Of sufficient intensity.
 - 3¹ Coming over the shoulder.
 - 4¹ Avoidance of reading in strong sunlight.
 - 5¹ Avoidance of glares and shadows.
 - 6¹ Regulating artificial and natural light for reading
 - a¹ In school.
 - b¹ In the home.
 - (b) Maintaining proper posture.
 - (c) Resting the eyes frequently.
 - (d) Wearing glasses when necessary.
 - (e) Refraining from extensive reading when tired or ill.
 - (2) When sewing, drawing or when doing other fine work.

- (3) Regulating attendance at moving pictures and choosing theaters having best equipment.
- (4) In certain occupations.
Protection from excessive heat, dust, fumes, chemicals.
- (5) In driving an automobile.
Protection from glares, dust, wind.
- d. Hygienic precautions
 - (1) In washing.
 - (2) In the use of individual towel.
 - (3) In the use of own clean handkerchief.
- e. The conservation of vision
 - (1) The importance of early detection and correction of defects
 - (a) Responsibility of the home; of the school.
 - (b) The services of an oculist in contrast to those of an optician or optometrist.
 - (c) Eye clinics.
 - (2) The need for maintaining in the school, healthful conditions which affect vision.
 - (a) Proper lighting.
 - 1¹ Window area.
 - 2¹ Adjustment of shades.
 - (b) Proper seating in relation to light and posture.
 - (c) Correct placing of blackboard of the right type.
 - (d) Color of walls.
 - (e) Selection of textbooks.
 - 1¹ Size of print.
 - 2¹ Type of paper—free from glare.
 - (3) The organization of sight saving classes.
 - (4) Selecting occupation or profession with due regard for
 - (a) The condition of the individual's eyes.
 - (b) Hazards to vision.
 - (5) Legislation in Pennsylvania regarding the education of the blind and partially sighted (School Laws. Section 1414.)

SUGGESTED ACTIVITIES AND PROCEDURES

1. Pupils read and prepare brief papers on the life of Helen Keller.
2. Committees prepare reports on the relation to the conservation of vision of improvements in lighting (1) in the home, (2) in the school.
3. Study the lighting in the classroom. Discuss arrangements for removing vision hazards in relation to seating, blackboards, use of the shades, and posture.
4. Make a survey of textbooks in use as to suitability of paper and printing. Note improvement in many of the newer books.

5. Teacher give summary of vision defects among pupils in each class. Note percentage of correction. Stress the need of 100 per cent correction. Make adjustments in seating for individuals with defective vision.
6. Discuss the special service given by an oculist, optician, optometrist in case of eye disorders.
7. Committees study statistics of the prevalence of vision defects among (1) rural pupils, (2) city pupils. Suggests possible reasons for the higher percentage of defects among rural pupils. Outline suggestions for securing correction.
8. Discuss the dangers of accidents in modern times due to color blindness.
9. Individuals report (questionnaire) on present practices in regard to the use of the eyes in home study. Suggest ways for improvement. Check on improvement in habits and practices later.

TEXTBOOKS

- WHEAT and FITZPATRICK. *Everyday Problems in Health*. American Book Company, New York. 1933. Problem 6.
- GREGG and ROWELL. *Health Studies—Personal Health*. World Book Company, Yonkers-on-Hudson, New York. 1932. Chapter 5.
- WINSLOW and HAHN. *New Healthy Living*, Book II. Charles E. Merrill Company, New York. 1929. Chapter 14.
- ANDRESS and BROWN. *Science and the Way to Health*. Ginn and Company, New York. 1929. Chapter 18.
- BURKARD, CHAMBERS and MARONEY. *Personal and Public Health*. Lyons and Carnahan, New York. 1930. Chapter 13.

THE SENSE OF HEARING

EVIDENCES OF PUPIL GROWTH

HABITS OR SKILLS

Washes ears carefully; avoids cleaning ears with anything except wash cloth; avoids blowing nose forcibly; uses precaution to protect others from infection if ear is discharging; does not shout into another person's ear; does not strike anyone on or near the ear; protects ears when swimming; consults parents or physician when there is evidence of ear trouble.

ATTITUDES

Appreciates the value of normal hearing; appreciates the importance of proper care of the ears; is considerate of those who are hard-of-hearing or deaf.

KNOWLEDGES

1. The importance of normal hearing
 - a. In every day life
 - (1) Sense of hearing one of the chief avenues of learning.
 - (2) Appreciation of music.
 - (3) Avoidance of accidents.

- b. In securing an education
Learning through listening to the spoken words of others;
judging people and situations by sound; music, etc.
2. The problem of defective hearing
 - a. Percentage of hearing defects among pupils in United States;
in Pennsylvania; in local schools.
 - b. One of the chief causes of retardation in school.
 - c. The cost of re-educating retarded pupils.
 - d. The potential seriousness of any hearing defect.
3. The structure and function of the parts of the ear
 - a. The outer ear
 - (1) The auricle.
 - (2) The canal.
 - (3) The ear drum.
 - b. The middle ear
 - (1) The bones—hammer, anvil, stirrup.
 - (2) The Eustachian tube.
 - c. The inner ear
 - (1) The cochlea.
 - (2) The semi-circular canals.
 - (3) The auditory nerve.
4. The process of hearing
 - a. The collection of sound waves.
 - b. The transmission of vibrations within the ear to the auditory nerve.
 - c. The transmission of the stimulus by the auditory nerve to the hearing center in the brain.
 - d. The interpretation of the stimulus by the brain.
5. The function of the ear in maintaining equilibrium
The work of the semi-circular canals, sight and muscular sense.
6. The function of carrying sensations of sound to the nervous system
The factor of noise.
7. Causes of ear disorders and disease
 - a. Foreign bodies in the ear
 - (1) Need for skill in removing.
 - (2) Dangers of puncturing ear drum.
 - b. Spread of infection during a cold
 - (1) Infection through Eustachian tube to ear and mastoid.
 - (2) Dangers of blowing nose forcibly.
 - (3) Prevention of spread of infection to others.

- e. Accumulation of hardened ear wax
How it should be removed.
- d. Diseases which predispose to ear infection
Scarlet fever, measles, diphtheria, grippe, meningitis, sinusitis.

Importance of testing hearing upon recovery.

- e. Dangers of infection while swimming.
 - f. Nervous disorders.
 - g. Diseased or enlarged tonsils.
 - h. Congenital deafness.
8. Preservation of normal hearing
- a. Proper care in removal of foreign bodies from the ear.
 - b. Prevention of diseases which predispose to ear infection.
 - c. Care of colds.
 - d. Removal of adenoids and diseased tonsils.
 - e. Proper personal care of the ears.
 - (1) Washing.
 - (2) Removing ear wax.
 - (3) Blowing the nose.
 - f. Consideration of the hearing of others.
 - (1) Shouting in person's ear.
 - (2) Slapping person on ear.
 - g. Consulting a physician at first symptoms of ear disorder.
Earache.
 - h. The detection and treatment of hearing disorders.
 - (1) Methods of testing hearing.
 - (a) Whispered speech.
 - (b) Tuning fork.
 - (c) Audiometer.
 - (d) Phono-audiometer.
 - (2) Difficulty of determining whether hearing defect will progress or respond to treatment.
 - i. Caring for the hard-of-hearing child in school.
 - (1) Seating where he can hear best.
 - (2) Favorable light to facilitate lip reading.
 - (3) Training other children to be considerate and helpful to those who are hard-of-hearing.
 - (4) Schools for the hard-of-hearing.
 - (5) Legislation (School Laws, Section 1414).
9. The problem of caring for the deaf
- a. Legislation in Pennsylvania (School Laws, Section 1414).

SUGGESTED ACTIVITIES AND PROCEDURES

Demonstrate testing hearing by one or more of the following methods, (1) whispered speech, (2) audiometer, (3) phono-audiometer.

TEXTBOOKS

WHEAT and FITZPATRICK. *Everyday Problems in Health*. American Book Company, New York. 1933. Problem 7.

GREGG and ROWELL. *Health Studies—Personal Health*. World Book Company, Yonkers-on-Hudson, New York. 1932. Chapter 5.

WINSLOW and HAHN. *New Healthy Living*, Book II. Charles E. Merrill Company, New York. 1929. Chapter 14.

ANDRESS and BROWN. *Science and the Way to Health*. Ginn and Company, New York. 1929. Chapter 18.

BURKARD, CHAMBERS and MARONEY. *Personal and Public Health*. Lyons and Carnahan, New York. 1930. Chapter 13.

THE SENSE OF TASTE

EVIDENCES OF PUPIL GROWTH

HABITS OR SKILLS

Avoids the use of tobacco in any form; avoids highly spiced foods.

ATTITUDES

Enjoys the natural flavor of foods.

KNOWLEDGES

1. The tongue, the organ of sensations of taste
 - a. Sensations of taste.
 - (1) Sweet, sour, bitter, salt.
 - (2) Substances must be dissolved.
 - b. Location of sensations of taste.
 - (1) Taste buds in tongue.
 - (2) Gustatory nerve.
2. Conservation of sense of taste
 - a. Keep mouth clean.
 - b. Avoid highly spiced foods.
 - c. Avoid use of tobacco.
3. Relation between sensations of taste and smell
Why it is difficult to taste when one has a cold.

TEXTBOOKS

GREGG and ROWELL. *Health Studies—Personal Health*. World Book Company, Yonkers-on-Hudson, New York. 1932. Chapter 5.

WINSLOW and HAHN. *New Healthy Living*, Book II. Charles E. Merrill Company, New York. 1929. Chapter 14.

ANDRESS and BROWN. Science and the Way to Health. Ginn and Company, New York. 1929. Chapter 18.

BURKARD, CHAMBERS and MARONEY. Personal and Public Health. Lyons and Carnahan, New York. 1930. Chapter 13.

THE SENSE OF SMELL

EVIDENCES OF PUPIL GROWTH

HABITS OR SKILLS

Avoids putting fingers or foreign objects in the nose; blows nose carefully; takes care of nasal passages when affected with a cold; has nasal obstructions removed when necessary.

ATTITUDES

Appreciates the need for proper care of the nasal passages.

KNOWLEDGES

1. Location of the sense of smell
 - a. Beginning of respiratory tract
 - (1) The olfactory nerve.
 - (2) The nasal passages
 - (a) Nostrils.
 - (b) Hairs.
 - (c) Mucous membrane.
 - (3) Turbinate bones.
2. Obstructions in the nasal passages
 - a. Adenoids.
 - b. Deviated septum.
3. Avoidance of unhealthful conditions
 - a. Catarrh.
 - b. Nosebleed.
4. Relation between sense of smell, taste and vision

TEXTBOOKS

GREGG and ROWELL. Health Studies—Personal Health. World Book Company, Yonkers-on-Hudson, New York. 1932. Chapter 5.

WINSLOW and HAHN. New Healthy Living, Book II. Charles E. Merrill Company, New York. 1929. Chapter 14.

ANDRESS and BROWN. Science and the Way to Health. Ginn and Company, New York. 1929. Chapter 18.

BURKARD, CHAMBERS and MARONEY. Personal and Public Health. Lyons and Carnahan, New York. 1930. Chapter 13.

VIII. Health of the Circulatory System

With the increase in circulatory diseases, more attention should be given to the factors responsible, many of which are to be found in

early childhood. Call attention to the effect of exercise of various types on the heart and the seriousness of certain infectious diseases upon heart tissue and the consequent effect upon its efficiency.

EVIDENCES OF PUPIL GROWTH

HABITS OR SKILLS

Maintains good posture in sitting, standing, walking or other activity; avoids wearing tight clothing; engages in some form of vigorous physical activity daily; relieves heart strain by muscular activity when obliged to stand long periods at a time; rests at frequent intervals when participating in vigorous physical activity; has an examination of the heart by a physician before participation in athletics or swimming; if he has heart disorder takes proper precautions for protection; eats balanced diet; eats food with iron content; takes proper amount of rest daily; takes care of infected teeth and tonsils; avoids other infections; has complete convalescence after infectious disease; gets plenty of fresh air and sunshine; is learning to control emotions; if he has heart disorder, chooses vocation with due consideration to limitations.

ATTITUDES

Appreciates the value of the practice of good hygiene in maintaining the health of the circulatory system; desires to practice the habits which promote good circulation; desires to avoid straining the heart through excessive physical activity; cooperates with parents and physician in caring for self if heart disorder is present; appreciates the need for avoidance of infections; appreciates the importance of having a heart examination before participating in strenuous competition in athletics or other vigorous activities.

KNOWLEDGES

1. Common experiences which indicate the need for a strong heart, good circulation and healthy condition of the blood
 - a. Participation in athletics
 - (1) The need of a strong heart to endure the strain.
 - (2) The importance of freedom from infection.
 - (3) The need for detection of heart defects through health examination.
 - b. Other forms of exercise
Swimming, walking, climbing stairs, dancing, strenuous work.
 - c. Exposure to cold—the need for good circulation to keep one warm in cold weather.
 - d. Illness—dependence on a strong heart to withstand the strain of severe illness.
2. General plan of the circulatory system (non-technical discussion)
 - a. The blood
 - (1) Carries nutrition to the tissues.

- (2) Takes waste products from the tissues.
- (3) Carries oxygen to the tissues.
- (4) Removes carbon dioxide from tissues.
- (5) Protects the body against infection.
- (6) Distributes glandular secretions.
- b. The blood vessels
 - (1) Channels to carry the blood to all parts of the body.
 - (2) Serve as a medium through which interchange of substances in the blood with those in other tissues is accomplished.
 - (3) Assist in regulating bodily temperature.
- c. The heart
 - A muscular organ.
- 3. The cell—the unit of structure in the body
 - a. Simple structure of cells.
 - b. Metabolism,—emphasize the continuance of this process all through life.
 - c. How cells reproduce.
 - d. Dependence on blood stream
 - (1) For nutrition.
 - (2) For oxygen supply.
 - (3) For removal of waste products.
 - (4) For protection against infection.
- 4. The composition of the blood
 - a. The red blood cells or corpuscles
 - (1) Work of hemoglobin in carrying oxygen in accordance with the needs of the tissues.
 - (a) Inability of the tissues to store up supplies of oxygen.
 - (b) Futility of taking breathing exercises to increase supply of oxygen in body when there is no demand for it in the tissues.
 - (2) Development of red blood corpuscles
 - (a) In red marrow of the long bones.
 - (b) Length of life of single red blood cell—(2-4 weeks).
 - (c) Breaking down in liver.
 - (3) Anemia
 - (a) Condition denoted by
 - 1¹ Reduction of number of red blood cells or
 - 2¹ Reduction of hemoglobin in each red cell.
 - (b) Effects on health
 - Diminishes oxygen carrying power of blood.

- (c) The importance of good hygiene in helping to correct anemia
 - 1¹ Foods containing iron.
 - 2¹ Adequate sleep and rest.
 - 3¹ Fresh air and sunshine.
 - (d) The meaning of blood count.
- b. The white blood cells or corpuscles
- (1) Ability to alter shape (amoeboid action).
 - (2) Proportion to red blood cells.
 - (3) How white corpuscles destroy germs (phagocytosis)
 - (a) Work of the leukocytes.
 - (b) Importance of this germicidal power in protecting the body in case of infection, local or general.
- c. Platelets
- Importance in coagulation of blood.
- d. The plasma of the blood
- (1) Liquid part of blood—enables it to flow to all parts of the body.
 - (2) Water content—action as a solvent.
 - (3) Composition of plasma
 - (a) Water.
 - (b) Gases.
 - (c) Food.
 - (d) Inorganic salts.
 - (e) Waste products.
 - (f) Protective substances.
 - (g) Hormones.
 - (4) Plasma—through process of osmosis becomes part of lymph stream.
5. The organs of distribution of the blood
- a. The heart
- (1) A hollow muscle
 - Importance of emphasizing that strength of heart muscle is developed on same principles as strength in other muscles.
 - (2) Structure of the heart.
 - (3) How the heart does its work.
 - (4) Nervous control of heart.
 - (5) The rhythm of the heart beat or cardiac cycle
 - (a) Influence of muscular exercise.
 - (b) Influence of emotions.
 - (6) What blood pressure means
 - How measured.

- (7) How heart is aided in its work
 - (a) By valves in veins.
 - (b) By exercise.
 - (c) By lungs.
 - (d) By massage.
 - (e) By posture.
- (8) The meaning of a "leaky heart"
 - The importance of prevention of infection.
- b. The blood vessels
 - (1) Functions of
 - (a) Arteries.
 - (b) Veins.
 - Varicose veins.
 - (c) The capillaries.
 - (2) Elasticity of blood vessels
 - (a) Importance in regulating bodily heat.
 - (b) What blushing is.
 - (3) Effects of exercise or massage on veins and arteries.
- 6. How the blood circulates (limited discussion)
 - a. The pulmonary system.
 - b. The systemic system.
 - c. The portal system.
- 7. The work of the lymphatic system
 - a. How the plasma becomes part of the lymph fluid.
 - b. Lymph spaces.
 - c. Lymphatic vessels.
 - (1) Structure of.
 - (2) Effect of contraction of muscles on flow of lymph.
 - d. The lymph glands
 - (1) Location, size, structure.
 - (2) Their functions
 - (a) Create white corpuscles.
 - (b) Protect the blood by filtering and killing germs.
 - (c) Importance of function during infection.
- 8. Care of the circulatory system
 - a. Avoidance of use of alcohol.
 - b. Avoidance of use of tobacco.
 - c. Need for adequate sleep and rest.
 - d. Avoidance of tight clothing.
 - e. Conserving bodily heat by proper amount of clothing.
 - f. Avoidance of infection.
 - g. Care of injured blood vessels.

- h. Care in participation in vigorous exercise—athletics.
- i. Influence of thought and feeling.
- j. Improving quality of the blood by hygienic practices.
Avoidance of quack remedies.
- k. Protection in case of heart disorder.
- l. Avoidance of drugs.
- 9. The need for prevention of circulatory diseases
 - a. Statistics showing high mortality rates from heart disease.
 - b. Other circulatory disturbances.

SUGGESTED ACTIVITIES AND PROCEDURES

1. Teacher demonstrate with one pupil pulse rate response to exercise and rest
 - a. Find normal pulse rate of pupil while standing. Repeat several times until two successive records are alike.
 - b. Have pupil run in place for fifteen seconds, bringing knees up.
 - c. Count pulse rate again immediately after the exercise.
 - d. Determine the time it takes for pulse to return to normal. See Williams, *Healthful Living*, page 313. Use this test to help determine fitness of pupil to take part in athletics in absence of more thorough examination.
(Caution: Do not attempt to interpret findings or arouse morbid interest on part of boys and girls).
2. Study circulation in foot of frog with use of microscope.
3. Have pupils examine the general structure of the heart of an animal secured from the butcher shop or home.

TEXTBOOKS

- WHEAT and FITZPATRICK. *Everyday Problems in Health*. American Book Company, New York. 1933. Problem 17.
- GREGG and ROWELL. *Health Studies—Personal Health*. World Book Company, Yonkers-on-Hudson, New York. 1932. Chapter 10.
- WINSLOW and HAHN. *New Healthy Living*, Book II. Charles E. Merrill Company, New York. 1929. Chapter 8.
- BURKHARD, CHAMBERS and MARONEY. *Personal and Public Health*. Lyons and Carnahan, New York. 1930. Chapter 8.

PHYSICAL EDUCATION

PURPOSE

From the viewpoint of pupil needs, physical education is essential regardless of facilities provided. It is recognized, however, that many schools are handicapped in developing an acceptable program by certain factors, chief among which are the following:

Inadequate facilities, indoors or out of doors, for physical education.

Limited equipment and supplies.

Untrained classroom teachers in charge of the program.

These conditions exist in many schools and it is necessary to make adjustments to provide a program that will meet the needs of the pupils as nearly as possible.

PHYSICAL EDUCATION DEFINED

Physical education is that phase of education concerned with rational motor activity and with the functioning of large muscle groups as a means of aiding in the growth and development of the child, and the physical and social efficiency of the adult, by developing the mind, the character and the structure and function of the body.

AIMS OF PHYSICAL EDUCATION

1. The improvement of physical efficiency.
2. The promotion of health and development of organic vigor which is the basis of vitality.
3. The development of such qualities as leadership, self-control, courage, alertness, loyalty, self-sacrifice, courtesy, and quickness of perception and of action.
4. The securing and maintenance of good posture through emphasis on correct standing, sitting and walking habits.
5. The development of a healthful interest in physical activity as a means of finding pleasure in leisure time through actual participation in the various fields of physical activity.

ORGANIZATION AND ADMINISTRATION

1. Facilities

a. The playground

The playground should be located adjacent to or near the building to permit better supervision and allowance for its use without great loss of time. It should be sufficiently large to permit a definite section to be assigned to each grade. Space should be allotted for the playing of such games as baseball, volley ball, basketball, soccer and track and field activities by both boys and girls as well as for the less active games.

b. The classroom

In most elementary schools, the classroom is the only room available for indoor physical education activities. Movable seats are desirable because they can be moved back against the walls, thus allowing for a greater variety of activities. This is particularly advisable for winter use when the playground is not in condition for outdoor activities.

Attention should be given to providing proper ventilation during physical education periods.

c. The corridor

The corridor space in some buildings can be used to advantage for rhythmical activities and some games.

d. The playroom

Some schools have a room which can be used for physical education. This may be an extra classroom or a basement room which is properly floored, lighted and ventilated. Where this condition exists, the playroom should be available at certain times to all grades.

e. The gymnasium.

Many new elementary schools are being provided with gymnasium-auditoriums. Schools with such facilities will be able to offer a wider range of activities than schools handicapped by lack of indoor space.

Cooperation by principals, teachers, pupils and janitors is essential in order to keep all facilities in a sanitary condition.

2. The teacher

The classroom teacher is, in most instances, responsible for the physical education activities of her pupils. If the activities are to be worthwhile, the teacher must be whole-heartedly in sympathy with them. Contact with her children through the physical education program gives the teacher an opportunity to secure an insight into the character of her children which she can get in no other way. The physical education period with its varied activities provides a great opportunity for social training and social adjustment. Children live largely in an active world and the teacher who cannot play with them cannot speak the language in which they are thinking and acting.

3. Pupil leaders

The use of pupil leaders provides an excellent opportunity for one of the most important objectives in educational training in leadership. Leaders should be selected on the basis of ability, attitude, influence with other pupils, and personality. It is well to change leaders on occasion in order to give a greater number of pupils an opportunity for this honor and training.

The use of pupil leaders, however, does not relieve the teacher of her responsibility but gives her a greater opportunity for supervision of all activities and for individual attention when necessary. She should be helpful, enthusiastic and encouraging.

Leaders may serve as game instructors, judges, score keepers, reporters and health officers, taking care of temperature and ventilation and assuming certain responsibility for enforcing and maintaining cleanliness and tidiness of buildings.

4. Time allotment

Physical education should have a regular place in the daily program and a special time reserved for it, just as is done in other subjects.

A minimum of ninety (90) minutes a week should be allotted to each of the first eight grades in addition to the one hundred and fifty (150) minutes per week for recess periods.

5. Directed recess periods.

The purpose of the recess periods in the middle of the forenoon and afternoon is to afford relaxation from the inactivity of the classroom by providing opportunity for physical exercise in the open air. Pupils are entitled to this time.

Recesses, weather permitting, should always be out of doors. The activities at this time should be so organized and directed that every child may have an opportunity for safe, vigorous play suitable to his age and strength. Where playground apparatus is available, it should be regularly used under proper supervision and direction.

The recess period is primarily designed for play—a period of relief from desk work and conscious mental effort. But a recess period which simply turns pupils out into the schoolyard, does not begin to accomplish the desired results for the majority of the pupils. The more aggressive children will monopolize the apparatus and the most desirable play space, while the more timid and less robust children, those who need the physical activity most, will stand about in groups, trying to keep out of the way, or hopelessly waiting for the turn which too often never comes. Many teachers and principals have deplored this condition, but felt helpless to remedy it. The method, sometimes tried, of having the teachers in the yard or playground for *so-called supervision*, does not help very much. This supervision usually amounts to little more than policing. It does reduce the liability to accident, but does not appreciably help to secure activity for all. The only satisfactory solution is the thorough organization of the recess period.

CLASSIFICATION OF ACTIVITIES

1. Games

Games provide plenty of exercise and great enjoyment and furnish a necessary outlet for the child's energies. There are many types of games—athletic, tag, goal, bean bag, ball and so forth. In the outline of games for the various grades, examples of all of the above types have been included. Games involving an "it" or "tag" element have a particular appeal for the elementary school child. They are simple in their organization, are quickly learned and because of this, a greater variety and number may

be taught. As the child grows older, these games are supplemented by the simple team games, which, in turn, are supplemented by competitive athletic games which are more highly organized:

2. Individual athletic events

These are generally elements of games which can be performed without dependence upon other players. They include running, jumping, chinning, throwing, kicking, and other similar types of activity.

3. Mimetic exercises

Mimetic exercises are imitative movements of well-known activities without the usual equipment used in these activities. They are very closely related to story plays but are more formal and accurate in their movements. They are selected for the purpose of developing powers of quickness, alertness, observation and individuality, as well as for recreational purposes. They are well suited to classroom work and may be used to teach the form of different athletic events to large numbers of pupils at the same time. They may be done to music if desired. The field of activities which may be imitated is practically limitless.

4. Relay races

Relay races are intensely popular with most groups, thus making it necessary for teachers to be sure that they are successfully conducted. The relay should be carefully explained and then illustrated by a group of two or three pupils. The starting and finishing lines must be understood and pupils should not be allowed to start ahead of an agreed starting time and line. Pupils seated at desks during schoolroom relays must be careful not to obstruct the passage of the runner. Teachers should be careful to keep the length of the relay within reason. Extreme care should be taken to name the correct winner. Because of their popularity, pupils will call for relays frequently, and the teacher should build up a program which involves the use of other types of activities, thus, avoiding the too frequent use of relay races.

5. Rhythmical activities

This field of activity includes singing games, folk dances or games, gymnastic dancing, natural dancing and social dancing. These activities give desirable training in self-control, poise and posture, in addition to providing exercise and recreation. The singing games and folk dances which are popular with elementary pupils, have grown out of the feeling, thought and customs of people in many countries for many generations. Boys and girls alike should take part in the rhythmical activities.

6. Stunts and contests

Stunts and contests are self-testing activities which provide an opportunity for every boy and girl to match skills; they give satisfaction and a sense of accomplishment, which fosters self-confidence, poise, motor control, and initiative. They are easily

taught and many can be engaged in by the pupils during home play periods. They lend themselves especially well to group organization and give opportunity for student leadership.

For safety, certain facilities are desirable—a turf plot, sawdust filled jumping pit, tumbling mats, straw mats or other suitable materials should be provided. Stunts should not be tried on hard surfaces.

GENERAL SUGGESTIONS TO TEACHERS

1. The teacher should always have the pupils outdoors, weather conditions and school organization permitting.
2. Coats and sweaters should be removed when the period is held in the classroom.
3. The teacher should develop a sympathetic understanding of the pupils.
4. Do not hesitate to participate in the play of children. Such participation tends to gain the respect and affection of the children.
5. The child who returns to school following an absence due to illness should be guarded from over-exertion.
6. When officiating, make quick, accurate and just decisions.
7. Use pupil leaders whenever possible.
8. Make all explanations as simple and concise as possible.
9. Save indoor activities for use on days of inclement weather.
10. Seasonal activities should be selected when possible.
11. Let the activity be its own reward.
12. Guide children in settling disputes and matters of discipline for themselves.
13. Preserve the play spirit in all activities.

EQUIPMENT

The list below indicates types of equipment desirable for physical education activities in elementary schools. The equipment should be available to teachers at all times.

Bags, Bean

Balls, Basket

Balls, Health (12"—15")

Balls, Playground Baseball (9"—12")

Balls, Soccer

Balls, Volley

Bats, Playground Baseball

Clubs, Indian (for games)

Nets, Volley Ball

Quoits

Ropes, Jumping (7'--16')

The use of a piano or victrola is desirable for the teaching of rhythmical activities. Records for the victrola are available for many of the activities.

REFERENCE BOOKS

Four books have been selected in which a description of all the suggested activities may be found. They are as follows:

1. NELSON, N. P., and VAN HAGEN, WINIFRED. *Physical Education for Elementary Schools*, A. S. Barnes and Company, New York. 1932.
2. Bulletin 12, *Course of Study in Physical Education for Grades I-VIII*, Department of Public Instruction, Commonwealth of Pennsylvania, Harrisburg, Pennsylvania. 1928.
3. BANCROFT, JESSIE H. *Games for the Playground, Home, School and Gymnasium*. Macmillan Company, New York. 1923.
4. FORBUSH, W. B., and ALLEN, H. R. *The Book of Games*. John C. Winston Company, Philadelphia. 1927.

SYMBOLS USED IN THE SECTION ON PHYSICAL ACTIVITIES

In the preceding list of reference books on physical education, each book is given a number. In the list of Physical Activities beginning below, each activity is followed by a book number and a page number.

It will be noted that each book has been given a number. Following the number which refers to the book, is one which indicates the page number.

Example. Crossing the Brook—1-90, 3-74, 4-15. 1-90 indicates that this game may be found on page 90 in Neilson and Van Hagen, on page 74 in Bancroft and on page 15 in Forbush and Allen.

Immediately following the titles of games, relays and story plays, certain letters will be found. If they follow titles of games or relays, they are interpreted as follows:

S—Schoolroom

G—Gymnasium or Play Room

P—Playground or Athletic Field

If used after story plays, they refer to seasons, as follows:

F—Fall

W—Winter

Sp—Spring

S—Summer

Titles and numbers following rhythmical activities indicate that either Columbia or Victor records are available.

PHYSICAL ACTIVITIES FOR GRADE SEVEN

GAMES

Baseball (Boys) P	1-274, 2-263
Basketball (Boys) G	1-276, 4-115
Chain Dodge Ball G-P	1-315
Chain Tag G-P	1-315, 4-160
Fox and Geese G-P	1-315, 3-92, 4-138
Hit Pin Baseball P	1-279
Horse Shoes P	1-280, 4-242
Maze Tag G-P	3-131, 4-149
Nine Court Basketball (Girls) G	1-282, 4-117
Nose and Toe Tag G-P	1-315, 4-34
Pin Football P	1-286
Poison G-P	1-315, 2-234, 3-148, 4-128
Schoolroom Volley Ball S	1-287, 3-402
Soccer P	1-287, 2-263, 4-182
Sponge Ball G-P	1-290
Tennis P	1-291
Tether Ball P	1-293, 3-409
Volley Ball G-P	1-294, 2-262, 3-413, 4-202
Whip Tag P	1-316, 3-206, 4-205

MIMETIC EXERCISES

Baseball Pitching	1-317
Baseball Play	1-317
Horseback Riding	2-65
Jumping Jack	1-317
Revolving Light,	1-317
Start of Race	1-316, 2-63
Windmills	1-316

RHYTHMICAL ACTIVITIES

		Record Numbers
Highland Schottische	1-301, 2-206	Col. A3039 Vic. 21616
Irish Lilt	2-204	Col. A3061 Vic. 21616
Old Dan Tucker II (American)	1-303	Vic. 20447
Pop Goes the Weasel III	1-303	
Rye Waltz	1-304	
Sailors Hornpipe (English)	2-207	Col. A3054 Vic. 21685
Schottische Couple Dance	1-305	
Tantoli (Swedish)	2-203	Col. A3054 Vic. 20992
The Crested Hen (Danish)	1-300	Vic. 21619
The Mangle (Danish)	1-302	
Uncle Sam's Frolic	1-306	

RELAY RACES

A Dozen Ways of Getting There	
G-P	1-312
Ball Passing Relay G-P	1-312
Chariot Race G-P	1-312
Goal Throwing Relay G-P	1-313, 2-250
Hoop Rolling Relay G-P	1-313
Jack Rabbit Relay G-P	1-313, 2-242, 4-169
Skin the Snake Relay G-P	1-314, 2-242, 4-173
Square Relay G-P	1-314

STUNTS AND CONTESTS

Bicycling	1-308
Camel Walk	1-309
Chair Vault	1-308
Elbow Roll	1-312, 2-288
Finger Feat	1-308
Flapper	1-327, and 312
Hand Stand	1-308, 3-250
Hand Walk	1-309
Long Reach	1-307
Setting Pegs	1-307
Shoulder Spring	1-308
Shoulder Stand	1-309
Straddle Jump	1-308
Wiggle Walk	1-308

INDIVIDUAL ATHLETIC EVENTS

Basketball One Hand Shot	1-297
Crab Walk Race	1-298
Lame Duck Race	1-298
Run—Boys' 70 yard	1-298, 2-276
Running. Hop, Step and Jump	
(Boys)	2-280
Seven Jumps (Boys)	1-298
Soccer Corner Kick for Ac-	
curacy	1-298
Soccer Heading for Distance	1-299
Soccer Punt for Distance	1-299
Soccer Throw-In for Distance	1-299
Standing Hop, Skip and Jump	
(Boys)	1-299
Standing Hop, Step and Jump	
(Boys)	1-299
Standing Whole Hammon	
(Boys)	1-299
Volley Ball Distance Throw	
(Girls)	2-281

PHYSICAL ACTIVITIES FOR GRADE EIGHT

GAMES

Advancement P	1-319
Bombardment P	3-334
Broncho Tag P	1-350, 4-201
Catch and Pull Tug of War G-P	1-350, 3-60, 4-129
Field Dodge Ball G-P	1-319
Hand Tennis G-P	1-320
Kickover Ball G-P	1-321
Master of the Ring G-P	1-351, 3-131, 4-179
Pig in the Hole P	1-351, 3-397
Poison Snake G-P	1-351, 3-149, 4-128
Seat Tag S	1-352, 3-172
Side Kick P	1-321, 2-263, 4-186
Soccer Tag P	1-352
Speedball P	1-322

MIMETIC EXERCISES

Basketball Passing	1-333
Basketball Goal Throw	1-333
Driving Golf Ball	1-333
Kicking Football	1-333
Putting the Shot	2-63
Rowing	2-64
Stretching	1-333
Swimming	2-58
Tennis Serve	1-333

RHYTHMICAL ACTIVITIES

Badger Gavotte	1-334
Come Let Us Be Joyful (German)	1-336
May Pole Dance	1-338, 2-210
Mallebrok (Danish)	1-337
Military Schottische	1-339, 2-208
Minuet III	1-340, 2-220
Rheinlander (Swedish)	1-344
Russian Polanaise	2-222
Strasak	2-215
Tarantella (Italian)	2-218
Virginia Reel	2-213

Record Numbers

Col. 577D
Vic. 20448
Vic. 20990
Col. A2062
Col. 50018D
Col. 33048F
Vic. 20447

RELAY RACES

Hold Hop Relay G-P	1-348
Human Hurdle Relay G-P	1-348
Japanese Crab Relay G-P	1-348, 3-115
Leap Frog Relay G-P	3-129, 4-170
Obstacle Relay G-P	1-349, 4-170
Run and Pass Relay G-P	1-349
Toss, Run and Catch Relay S	1-349
Wheelbarrow Relay G-P	1-350, 4-175

STUNTS AND CONTESTS

Blindfold Boxing Match	1-347
Duck Fight	1-347
Full Squat	1-346
Hand Spring	1-346
Hand Stand Dip	1-347, 2-88, 3-246, 4-260
Left (right) Arm Chair Stand	1-346
One Arm Push Up	1-346
Shoulder Dive	1-347
Spinning Wheel	1-346
Touch Toe Jump	1-346

INDIVIDUAL ATHLETIC EVENTS

Crooked Man Race	1-331
Horse Shoe Pitch	1-331
Lame Dog Race	1-331
Run—Boys' 80 yard	1-331, 2-276
Standing Three Hops (Boys)	1-331
Standing Triple Broad Jump (Boys)	1-331
Tennis Serve for Accuracy	1-332
Volley Ball Serve for Accuracy	1-332, 2-268
Walking Race	1-332

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AMERICAN MEDICAL ASSOCIATION. Hygeia, the Health Magazine. American Medical Association, 535 North Dearborn Street, Chicago, Illinois.

AMERICAN PHYSICAL EDUCATION ASSOCIATION. Journal of Health and Physical Education. American Physical Education Association, 311 Maynard Street, Ann Arbor, Michigan.

NATIONAL SAFETY COUNCIL. Safety Education. One Park Avenue, New York City.